



# CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY

An Autonomous Institute | Affiliated to Osmania University  
Kokapet Village, Gandipet Mandal, Hyderabad, Telangana-500075, www.cbit.ac.in



COMMITTED TO  
RESEARCH,  
INNOVATION AND  
EDUCATION

47  
years

A

## Report

on

One-week International Online Workshop on “**AI & ML for Societal Impact: Healthcare and Agricultural Applications**” Organized by Department of CSE, CBIT in Association with ACM Hyderabad Deccan Professional Chapter from January 5th to January 9th, 2026

## Brochure

<p><b>CHIEF PATRON</b> <b>Sri. N. Subash</b> President, CBIT (A)</p> <p><b>PATRON</b> <b>Prof. C. V. Narasimhulu</b> Principal, CBIT (A)</p> <p><b>COORDINATORS</b> Prof. S. China Ramu Professor, Department of CSE Dr. Kolla Morarjee Associate Professor, Department of CSE Dr. G. Kiran Kumar Associate Professor, Department of CSE</p> <p><b>CO-COORDINATORS</b> Dr. I. Srujana, Assistant Professor, CSE Smt. Ch. Madhavisudha, Assistant Professor, CSE Dr. M. Anila, Assistant Professor, CSE</p> <p><b>ADVISORY COMMITTEE</b> Prof. K. Krishnaveni, Vice-Principal - Academics, CBIT Prof. P. V. Ravindra Reddy, Vice-Principal - Admn, CBIT Prof. Umakanta Choudhary, Advisor, I &amp; I, CBIT Prof. N. V. Koteswara Rao, Director IQAC, CBIT Prof. Suresh Fabbaja, Director, AEC, CBIT Prof. P. Prabhakar Reddy, Director, Academics, CBIT Prof. D. Krishna Reddy, Director R&amp;D, CBIT Prof. B. Linga Reddy, Director, SAP, CBIT Dr. N. L. N. Reddy, Advisor, CDC, CBIT Prof. M. Swamy Das, CSE, CBIT Prof. Raman D, CSE, CBIT Prof. R. Ravindra Reddy, CSE, CBIT Dr. Muniraju Naidu Vellamudi, Chairperson ACM, Hyderabad Deccan Professional Chapter</p> <p><b>ORGANISING COMMITTEE</b> Dr. T. Saranya Kamari, Assistant Professor, CSE Mrs. S. Durga Dewi, Assistant Professor, CSE Sci. P. Ramesh Babu, Programmer, CSE</p>	<p><b>Resource Persons</b></p> <ul style="list-style-type: none"> <li>• Prof. Dharmarath Ramesh Associate Professor, Department of CSE, IIT Dhanbad</li> <li>• Dr. Elsieh Karati Assistant Professor, Department of CSE, NIT Warangal</li> <li>• Sri. Satish Ambesange CEO, PragyanAI, Bangalore</li> <li>• Sri Srinivas Mallampati Founder &amp; CEO TechyBee EduCon Private Ltd.</li> <li>• Dr. D.L.S. Reddy Associate Professor, Department of AIDS, CBIT</li> <li>• Dr. T. Sridevi Associate Professor, Department of CSE, CBIT</li> </ul> <p><b>Intended Participants:</b> Students, Research Scholars, and Industry Professionals.</p> <p><b>Registration fee:</b></p> <ul style="list-style-type: none"> <li>• Rs. 100 for Students</li> <li>• Rs. 150 for Research Scholars</li> <li>• Rs. 250 for Industry Professionals</li> </ul> <p>75% Attendance is mandatory for receiving E- Certificate</p> <p><b>QR Code for Payment:</b></p>  <p><b>Registration Link:</b> <a href="https://forms.gle/WCCGytSeZSNuYp6C7">https://forms.gle/WCCGytSeZSNuYp6C7</a></p> <p><b>Last Date for Registration: 03-01-2026</b></p> <p><b>For Registration &amp; Other Details</b> Contact: Dr. M. Anila Mobile No: +91 96028 78201 Email ID: anila_cse@cbit.ac.in</p>	<p style="text-align: center;"></p> <p style="text-align: center;"><b>CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (Autonomous)</b></p> <p style="text-align: center;"><b>An International One-Week Online Workshop on “AI &amp; ML for Societal Impact: Healthcare and Agricultural Applications”</b></p> <p style="text-align: center;"><b>5<sup>th</sup> Jan, 2026 – 9<sup>th</sup> Jan, 2026</b></p> <p style="text-align: center;"><b>Registration Form</b></p> <ol style="list-style-type: none"> <li>1. Name: .....</li> <li>2. Highest Qualification: .....</li> <li>3. Designation: .....</li> <li>4. Organization: .....</li> <li>5. Address: .....</li> <li>6. Mobile No: .....</li> <li>7. Email ID: .....</li> </ol> <p style="text-align: center;">Signature of the Participant    Signature of the Sponsoring Authority</p>
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**ABOUT CBIT (AUTONOMOUS)**

Chaitanya Bharathi Institute of Technology is one of the premier Engineering Colleges in the self-financing category in the state of Telangana established in the year 1979. The college offers 11 UG and 10 PG Programmes. The Institute has become Autonomous under UGC w.e.f. 2013-14. UG Programmes are accredited by NBA in the year 1998, 2004, 2008, 2013, 2017, 2022 and Five PG Programmes have been accredited by NBA in 2020. The Institute is accredited by NAAC with CGPA of 3.59 on seven-point scale at 'A++' grade in 2023 for five years. CBIT (A) ranked in the rank band 150-200 in Engineering Category under National Institutional Ranking Framework (NIRF), Govt. of India, MHRD. The College Campus is spread across 90 acres.



**ABOUT CSE DEPARTMENT**

The Department of CSE was started in the year 1985 with an intake of 20. The intake was gradually increased to 300 with five sections. Department started M. Tech. program in the year 2002 and currently running with an intake of 24. CSE Department is a recognized research center under Osmania University. B.E. (CSE) Program was accredited by the NBA for the first time in the year 1998 with 'A' grade for 3 years and being successfully accredited.

The Department has committed and well qualified staff. The faculty is active in publishing their research work in various Conferences/Journals. It has been conducting various workshops and certification programs including

Microsoft and IBM, professional activities in collaboration with CSI, ISTE along with student branches of IEEE and CSI.

**ABOUT THE WORKSHOP**

The workshop on "AI & ML for Societal Impact: Healthcare and Agricultural Applications" aims to explore how Artificial Intelligence and Machine Learning can address real-world challenges in healthcare and agriculture. It will feature expert talks, practical insights, and discussions on innovative AI-driven solutions. Participants will gain exposure to emerging technologies, case studies, and interdisciplinary applications. The program is designed to benefit students, researchers, and professionals interested in socially impactful AI and ML advancements. Participants will be able to:

- Apply AI & ML techniques to real societal problems
- Develop healthcare and agricultural AI models
- Understand ethical and explainable AI practices
- Design scalable AI solutions for rural and social development

**WORKSHOP CONTENTS**

- Foundations of AI & ML for Societal Impact
- Machine Learning Fundamentals for Healthcare Applications
- AI Techniques for Disease Prediction and Medical Diagnosis
- AI-Based Solutions for Smart and Precision Agriculture
- Crop Yield Prediction and Pest/Disease Detection using ML
- Designing Scalable and Sustainable AI Models for Real-World Deployment
- Future Agricultural disruption using Agentic AI and GenAI



**CHAITANYA BHARATHI  
INSTITUTE OF TECHNOLOGY  
(Autonomous)**

**Department of Computer Science  
and Engineering**

In Association with  
**ACM Hyderabad Deccan Professional Chapter**



is Organizing  
**An International One-Week  
Online Workshop**

on  
**"AI & ML for Societal Impact:  
Healthcare and Agricultural  
Applications"**

**5<sup>th</sup> Jan, 2026 - 9<sup>th</sup> Jan, 2026**

**Chaitanya Bharathi Institute of Technology  
(Autonomous)**

Affiliated to Osmania University,  
Accredited by NAAC A++, Kolhapur (V), Gandipet (M),  
Hyderabad-75, Telangana State, India.

## Schedule and Topics

Day wise	10.00AM to 11:30 AM	02:00PM to 03:30PM
<b>Day 1 05/01/2026</b>	Fundamentals of AI and its applications <b>Dr. Padmaja S</b> Assistant Professor, Department of Computer Science, College of Computer Engineering and Sciences, PSAU, Al-Kharj, Saudi Arabia. <b>Mobile:</b> +966-504769356 <b>Email:</b> p.savaram@psau.edu.sa	AI Applications for Agriculture <b>Dr. DLS Reddy,</b> Associate Professor, Department of AIDS, CBIT <b>E-mail:</b> dlsrinivasareddy_aids@cbit.ac.in <b>Mobile:</b> 9441794626
<b>Day 2 06/01/2026</b>	AI and ML impacts in Realtime Social relevant applications <b>Dr. Prakash Kodali</b> Assistant Professor, Department of ECE, NIT Warangal <b>E-mail:</b> kprakash@nitw.ac.in <b>Mobile:</b> 8074035659	Generative AI for Healthcare: Models & Application <b>Dr. Vijay Nalamothu</b> Senior consultant Deloitte, Hyderabad <b>E-mail:</b> nvijay5757@gmail.com <b>Mobile:</b> 9581495757
<b>Day 3 07/01/2026</b>	AI/ML Applications for Effective and Efficient, Crop Diseases Management <b>Dr. K. Rajasekhar</b> Senior Vice President (Research and Development -Technology), Voice Gate India <b>E-mail:</b> drkr Sri@gmail.com <b>Mobile:</b> 8019994466	Building AI applications in Agriculture that knows your data: the RAG pipeline <b>Dr Sreenivasulu Madichetty</b> Manager-Data Science Publicis Sapient, Hyderabad <b>Email:</b> sreea568@gmail.com <b>Mobile:</b> 7981302284



<b>Day 4</b> <b>08/01/2026</b>	Digital Twin Meets Blockchain for Next-Gen Healthcare Data Security and Analytics <b>Dr. Ramesh Dharavath H N</b> Associate Professor, Department of CSE, IIT Dhanbad. <b>E-mail:</b> <a href="mailto:dramesh@iitism.ac.in">dramesh@iitism.ac.in</a> <b>Mobile:</b> 9471191814	Future Agricultural Disruption using AgenticAI and GenAI <b>Sri. Sateesh Ambesange</b> CEO, PragyanAI, Bangalore <b>E-mail:</b> <a href="mailto:sateesh.ambesange@pragyanai.com">sateesh.ambesange@pragyanai.com</a> <b>Mobile:</b> 9741007422
<b>Day 5</b> <b>09/01/2026</b>	AI for Drug Discovery <b>Dr KVS N Rama Rao,</b> Professor & Head AIML Spoorthy Engineering college Hyderabad <b>Email:</b> <a href="mailto:kvsnr@gmail.com">kvsnr@gmail.com</a> <b>Mobile:</b> 9848292046	Responsible AI for Ayush, Healthcare Sector: Challenges and Solutions  <b>Dr. Saketh Ram Thrigulla</b> Research Officer (Ayurveda), CCRAS-National Institute of Indian Medical Heritage, Hyderabad <b>E-mail:</b> <a href="mailto:dr.saketram@gmail.com">dr.saketram@gmail.com</a> <b>Mobile:</b> 9849995719

The Department of Computer Science and Engineering at Chaitanya Bharathi Institute of Technology, Hyderabad successfully organized an International One Week Online Workshop on” **AI & ML for Societal Impact: Health Care and Agriculture Applications**”, January 5th to 9th, 2026. The session has eminent, Expert persona as Resources persons from International and National level Institute and Industry. The Faculty Coordinators are Prof. S. China Ramu, Dr Kolla Morarjee, Dr G Kiran Kumar and Co-coordinators are Dr. I. Srujana, Smt Ch, Madhavi Sudha and Dr. M. Anila of CSE Department. The Session was scheduled from 10.00 AM to 4.00 PM, and the Intended participants are Students, Research Scholars and Industry professions. The number of participants is **163**. The Outcome of this workshop is as follows: Participants will be able to Apply AI & ML Techniques to real societal problems. Develop healthcare and agricultural AI models. Understand ethical and explainable AI practices. Design scalable AI Solutions for rural and social development.

### Day Wise Summary

#### Day-1(05/01/2026) Forenoon:

**Speaker: Dr. Padmaja S**

**Topic: Fundamentals of AI and its applications**

The session provided an in-depth overview of core algorithms used across various Artificial Intelligence (AI), Machine Learning (ML), and Deep Learning (DL) applications, with a strong emphasis on their relevance to healthcare and societal problem-solving. The speaker began by explaining the fundamental algorithmic approaches, including rule-based systems, classical machine learning techniques, and deep learning models, outlining their applicability to different problem domains. Practical examples were presented on the diagnosis of heart diseases, demonstrating how AI-based rule systems, machine learning classifiers, and deep learning architectures can be applied to medical data for effective clinical decision support. The session clearly explained which algorithms are suitable for specific healthcare problems, based on factors such as data type, problem complexity, and performance requirements. The speaker also discussed healthcare about classification, categorizing medical challenges into tasks such as diagnosis, prediction, risk assessment, and monitoring. For each category, appropriate AI and ML techniques were highlighted, enabling participants to understand the

rationale behind algorithm selection. A detailed explanation of the end-to-end implementation pipeline for real-world AI systems was provided. This included problem definition, data collection, pre-processing and feature engineering, model selection and training, deployment, and continuous monitoring. Emphasis was placed on model evaluation, maintenance, and continuous improvement to ensure robustness, accuracy, and reliability in real-time healthcare applications. In addition, the session addressed key research challenges in applying AI to healthcare, such as data quality, interpretability, scalability, ethical considerations, and real-world deployment constraints. The speaker encouraged participants to focus on building AI-driven solutions for real-world societal problems, highlighting the transformative potential of AI in healthcare and beyond. Overall, the session was highly informative and insightful, equipping participants with both the theoretical understanding and practical knowledge required to design, implement, and deploy AI systems aimed at solving complex societal challenges.

**Day-1(05/01/2026) Afternoon**

**Speaker: Dr. DLS Reddy**

**Topic: AI Applications for Agriculture**

The session delivered by the resource person focused on the application of Artificial Intelligence (AI) in agriculture, with emphasis on intelligent monitoring, data-driven decision-making, and automation in crop management systems. The speaker began by explaining how AI models can predict soil characteristics using image-based analysis, enabling better assessment of soil health and moisture conditions. Key applications of AI in agriculture were discussed, including crop health monitoring, yield prediction, disease detection, and precision irrigation. The importance of building effective AI models using combined datasets was highlighted, where integration of image data, sensor readings, and environmental data leads to improved model accuracy and robustness. The session also addressed challenges in monitoring greenhouse crops, such as environmental variability and data reliability, and presented AI-driven methodologies to overcome these issues. An overview of an intelligent greenhouse monitoring platform was provided, covering the hardware layer, data monitoring layer, and core subsystems integrated into a unified system. The intelligent control system for greenhouses, which automates climate and irrigation management, was also explained. In addition, the workflow of crop growth intelligence analysis systems was outlined, from data collection to prediction and decision support. The session concluded with a discussion on the use of drones in precision irrigation, demonstrating how aerial imaging and AI analytics enable targeted water management. Overall, the session offered valuable insights into AI-enabled sustainable and efficient agricultural practices.

**Day-2(06/01/2026) Forenoon**

**Speaker: Dr. Prakash Kodali**

**Topic: AI and ML impacts in Real-time Social relevant applications**

During the session on “AI and ML Impacts in Real-Time Socially Relevant Applications,” Prakash Kodali emphasized that Artificial Intelligence and Machine Learning are no longer confined to theoretical research but have become powerful enablers of practical, real-time solutions addressing critical societal needs. He highlighted how AI/ML, when integrated with IoT, embedded systems, flexible electronics, and edge computing, enables continuous sensing, intelligent decision-making, and rapid response in domains such as healthcare, agriculture, energy, and public safety. Drawing from real-world examples, he explained how wearable and self-powered sensors can support early disease detection, how ML-driven

analytics can assist farmers through smart monitoring and prediction, and how intelligent systems can enhance energy efficiency and sustainability. He stressed that the true impact of AI and ML lies in developing affordable, scalable, and socially inclusive technologies, particularly for rural and resource-constrained environments. The session concluded with his vision that future AI systems must be human-centric, ethically designed, and tightly coupled with real-time hardware platforms to ensure meaningful social transformation rather than isolated technological advancement.

### **Day-2(06/01/2026) Afternoon**

**Speaker: Dr. Vijay Nalamothu**

**Topic:** Generative AI for Healthcare: Models & Application

The session focused on the applications and benefits of generative AI in healthcare, led by Dr. Vijay Nalamutu, addressing various personas and challenges in improving patient care and operational efficiency. The workshop focuses on generative AI in healthcare, emphasizing its relevance and applications. Dr. Vijay Nalamutu, an expert in AI and machine learning, leads the session. Key challenges in healthcare include massive data generation, limited time for doctors, and high-risk decisions. Generative AI aids clinicians by improving decision-making efficiency and enhancing patient care quality. Discusses a case study involving four healthcare personas: clinician, imaging specialist, researcher, and administrator. Each persona has specific roles and goals in utilizing LLM technology for improved patient care and operational efficiency. LLMs assist clinicians by simplifying complex medical information and enhancing patient education. Imaging specialists benefit from LLMs through synthetic image generation and improved diagnostic support. Researchers leverage LLMs for literature review efficiency, identifying trends, gaps, and potential drug targets. Healthcare administrators utilize LLMs for data analysis to improve scheduling, detect anomalies, and enhance operational insights. Discussed steps to browse FHIR data, create AI applications, and set up healthcare data stores. Highlighted the importance of roles in Google Cloud for managing healthcare applications and data. Concluded with insights on generated AI's relevance in modern healthcare systems.

### **Day-3(07/01/2026) Forenoon**

**Speaker: Dr. K. Raja Sekhar**

**Topic:** AI/ML Applications for Effective and Efficient, Crop Diseases Management

Dr. K. Rajasekhar delivered an insightful seminar on AI + IoT for Crop Disease Management, highlighting how the convergence of artificial intelligence and Internet of Things technologies can address critical challenges in agriculture. He emphasized the growing problem of crop diseases and the role of IoT-based sensing systems in continuous field monitoring, where a huge amount of heterogeneous data (images, environmental parameters, and soil conditions) is generated. The talk discussed the use of lightweight CNN models, transfer learning, TinyML, and CPU-based inference for deployment on edge IoT devices, enabling real-time disease detection with low power consumption often supported by solar and bio-battery solutions. Dr. Rajasekhar explained the relevance of edge computing over monolithic GPU-based systems, contrasting Raspberry Pi-based edge devices with federated computing approaches to reduce latency, bandwidth usage, and privacy risks. He also covered the application of GANs for data augmentation to overcome limited labelled datasets and optimization techniques for efficient model performance under constrained resources. Practical aspects such as the communication layer in IoT architectures, integration with Kisan Call Centre support systems, and the current dependence of India on costly,

China-imported agricultural sensors were discussed as key challenges. Finally, he stressed the need for indigenous sensor development, collaboration with agricultural universities in Telangana, and sustainable, low-cost AIoT solutions to make crop disease management scalable and farmer-friendly.

### **Day-3(07/01/2026) Afternoon**

**Speaker: Dr Sreenivasulu Madichetty**

**Topic:** Building AI applications in Agriculture that knows your data: the RAG pipeline  
Building AI applications in Agriculture that knows your data: the RAG pipeline

The speaker delivered an insightful presentation on the topic “Building AI Applications in Agriculture that Knows Your Data: The RAG Pipeline.” The session focused on how Artificial Intelligence can be effectively applied in agriculture by combining large language models with domain-specific agricultural data using the Retrieval-Augmented Generation (RAG) approach. The speaker explained that agriculture generates a huge amount of data from sources such as soil sensors, crop disease records, weather reports, and advisory documents, but this data is often underutilized. The RAG pipeline was presented as a solution to make AI systems “aware” of local and contextual agricultural knowledge, thereby improving accuracy and reducing incorrect or hallucinated responses. The talk also highlighted the role of IoT devices, edge computing, lightweight models, and low-power deployment suitable for rural and remote areas. Challenges such as data quality, infrastructure limitations, cost of sensors, and real-time integration were discussed, along with future research opportunities in smart farming and farmer-centric AI systems. Overall, the presentation emphasized the importance of building trustworthy, data-driven AI solutions to support sustainable agriculture and informed decision-making for farmers.

### **Day-4(08/01/2026) Forenoon**

**Speaker: Dr. Ramesh Dharavath H N**

**Topic:** Digital Twin Meets Blockchain for Next-Gen Healthcare Data Security and Analytics

The speaker delivered an insightful presentation on the topic “Digital Twin Meets Blockchain for Next-Gen Healthcare Data Security and Analytics”. The session focused on the details of digital twin, block chain and artificial intelligence and explained how these can provide secure, intelligent and adaptive models in the healthcare field. He also spoke about applications like smart manufacturing and supply chain, smart infrastructure in industry 4.0. He also focused on future innovations and opportunities like explainable AI, de-centralized identifiers, interoperability standards and advanced privacy mode. It can be effectively applied in agriculture by combining large language models with domain-specific agricultural data using the Retrieval-Augmented Generation (RAG) approach. The speaker explained that agriculture generates a huge amount of data from sources such as soil sensors, crop disease records, weather reports, and advisory documents, but this data is often underutilized. The RAG pipeline was presented as a solution to make AI systems “aware” of local and contextual agricultural knowledge, thereby improving accuracy and reducing incorrect or hallucinated responses. The talk also highlighted the role of IoT devices, edge computing, lightweight models, and low-power deployment suitable for rural and remote areas. Challenges such as data quality, infrastructure limitations, cost of sensors, and real-time integration were discussed, along with future research opportunities in smart farming and farmer-centric AI systems. Overall, the presentation emphasized the importance of building



trustworthy, data-driven AI solutions to support sustainable agriculture and informed decision-making for farmers.

#### **Day-4(08/01/2026) Afternoon**

**Speaker: Sri. Sateesh Ambesange**

**Topic:** Future Agricultural Disruption using AgenticAI and GenAI

The speaker delivered an insightful presentation on the topic “Building AI Applications in Agriculture that Knows Your Data: The RAG Pipeline.” The session focused on how Artificial Intelligence can be effectively applied in agriculture by combining large language models with domain-specific agricultural data using the Retrieval-Augmented Generation (RAG) approach. The speaker explained that agriculture generates a huge amount of data from sources such as soil sensors, crop disease records, weather reports, and advisory documents, but this data is often underutilized. The RAG pipeline was presented as a solution to make AI systems “aware” of local and contextual agricultural knowledge, thereby improving accuracy and reducing incorrect or hallucinated responses. The talk also highlighted the role of IoT devices, edge computing, lightweight models, and low-power deployment suitable for rural and remote areas. Challenges such as data quality, infrastructure limitations, cost of sensors, and real-time integration were discussed, along with future research opportunities in smart farming and farmer-centric AI systems. Overall, the presentation emphasized the importance of building trustworthy, data-driven AI solutions to support sustainable agriculture and informed decision-making for farmers.

#### **Day-5(09/01/2026) Forenoon**

**Speaker: Dr KVSN Rama Rao,**

**Topic:** AI for Drug Discovery

The workshop featured an engaging presentation on the transformative role of Artificial Intelligence (AI) in drug discovery, tailored for students interested in interdisciplinary projects. The speaker highlighted how AI accelerates traditional drug development processes, which typically take 10-15 years and cost billions, by leveraging machine learning, deep learning, and generative models. Key emphasis was placed on real-time applications bridging computational data science. Key Real-Time Applications discussed as follows Various AI tools were discussed that help predicting protein structures with atomic accuracy, enabling rapid screening of millions of compounds. Generative AI models, such as those from Insilico Medicine, design novel drug candidates by optimizing molecular properties for efficacy and safety. A few Platforms are suggested that repurpose existing drugs for different diseases, slashing development timelines from years to months. Encouraged students to use neural networks for forecast absorption, distribution, metabolism, excretion, reducing animal testing and failure rates in clinical trials. Real-world examples included Exscientia's AI-designed cancer drug, which entered human trials in record time. Personalized Medicine: AI analyses genomic data for patient-specific treatments, as seen in Tempus's oncology platforms. The speaker discussed a few case studies from companies that added more insights. Project Encouragement and Takeaways: Students were urged to pursue hands-on projects using open-source tools like PyTorch for model training, and datasets from online resources. Suggested ideas included building AI models for antibiotic discovery or predicting drug interactions. The session stressed ethical considerations, such as data bias and regulatory compliance.

## Day-5(09/01/2026) Afternoon

**Speaker: Dr. Saketh Ram Thrigulla**

**Topic:** Responsible AI for Ayush, Healthcare Sector: Challenges and Solutions

**Topic:** Responsible AI for Ayush, Healthcare Sector: Challenges and Solutions

The session on "Responsible AI for Ayush, Healthcare Sector: Challenges and Solutions," led by the **Dr. Saketh Ram Thrigulla**, examined AI's integration into India's traditional Ayush systems (Ayurveda, Yoga, Unani, Siddha, and Homeopathy) alongside modern healthcare. Key discussions highlighted AI's potential in predictive diagnostics via Prakriti assessments, Ayurgenomics for personalized treatments, and platforms like Ayush Grid for digital consultations, as recognized by WHO initiatives

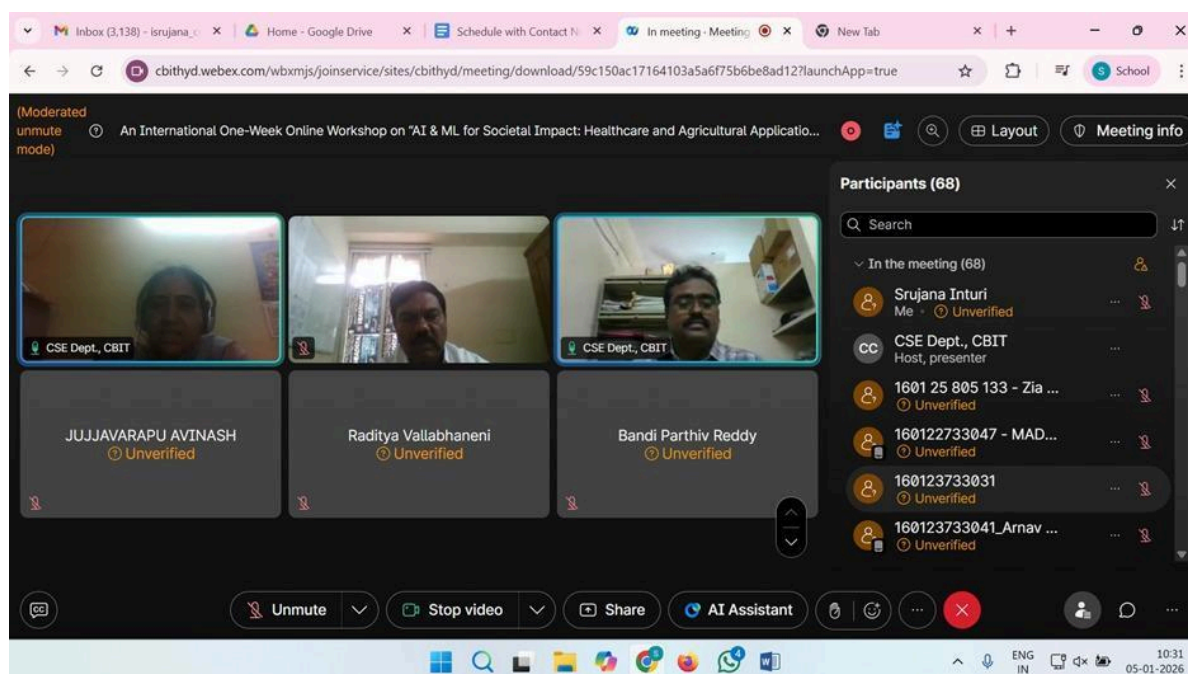
### Challenges Discussed:

Major hurdles include data privacy risks with sensitive patient information, algorithmic biases against diverse populations, limited digital literacy among Ayush practitioners, infrastructural gaps in low-resource settings, and resistance to blending traditional wisdom with AI. Ethical concerns around transparency and accountability further complicate adoption, especially in preserving holistic care philosophies.

### Suggested Solutions:

Proposed frameworks emphasize ethical guidelines, regulatory compliance, localized governance, and bias-mitigation through contextual validation. Training programs for practitioners, interoperable systems like TKDL for knowledge preservation, and multi-stakeholder pilots ensure equitable, transparent AI deployment, fostering global integration of Ayush.

## Photographs:



Coordinators Dr K Morarjee and Dr G Kiran Kumar and Smt S Durga Devi briefing about the workshop and inviting the Speaker

An International One-Week Online Workshop on "AI & ML for Societal Impact: Healthcare and Agricultural Applications" (Moderated unmute mode) Meeting Info 01:29:17

CSE Dept., CBIT CSE Dept., CBIT Dr. Padmaja S Unverified Bandi Parthiv Reddy Unverified

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### What is AI vs Machine Learning vs Deep Learning?

- Artificial Intelligence:** Ability of a machine to imitate intelligent human behavior
- Machine Learning:** Application of AI that allows a system to automatically learn and improve from experience
- Deep Learning:** Application of Machine Learning that uses complex algorithms and deep neural nets to train a model

1/5/2026 Workshop: "AI & ML for Societal Impact: Healthcare and Agricultural Applications"

Participants (93)

Invite and remind

Participants (93)

- CSE Dept., CBIT Host, me
- Dr. Padmaja S Presenter • Unverified
- 1601 25 805 133 - Zia Khan Unverified
- 160122733047 - MADUPU L... Unverified
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- 160123733041\_Arnab Katta Unverified
- 160123733049\_Arslaan Unverified
- 160123733164\_Sahithi Pathem Unverified

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Screenshot taken during Day1 Introductory Session by Dr. Padmaja S

An International One-Week Online Workshop on "AI & ML for Societal Impact: Healthcare and Agricultural Applications" (Moderated unmute mode) Meeting Info 50:55

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P.Mahesh Nayak Unverified D. Madhavi Latha Unverified DIKSHA SINGH Unverified Ch. Madhavi Sudha Unverified

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An International One-Week O... (Moderated unmute mode) Meeting Info01:04:24Layout

CSE Dept., CBIT

Dr D. L.S.Reddy  
Unverified

Dr. Kolla Morarjee  
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Dr P Rajeshwari  
Unverified

pradeep  
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## AI Applications for Agriculture

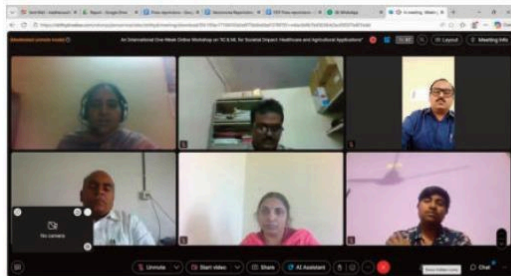
**Key Applications**

- Crop Monitoring**
  - Drones and satellites take images of fields
  - AI detects plant stress, nutrient deficiency, or disease early
- Pest & Disease Detection**
  - Computer vision spots pests or leaf diseases from photos
  - Helps farmers treat only affected areas (less pesticide use)
- Smart Irrigation**
  - AI uses soil moisture + weather data
  - Waters crops only when needed → saves water
- Yield Prediction**
  - AI predicts how much crop will be produced
  - Helps with planning, storage, and pricing
- Autonomous Farming**
  - Self-driving tractors and harvesters
  - Robots for weeding and planting
- Precision Farming**
  - AI decides where, when, and how much to plant, fertilize, or spray
  - Reduces cost and environmental damage

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## CBIT Hosts International Workshop on AI & ML for Societal Impact



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Chaitanya Bharathi Institute of Technology (CBIT) successfully inaugurated an International One-Week Online Workshop on "AI & ML for Societal Impact: Health Care and Agricultural Applications," organized by the Department of Computer Science and Engineering, held from June 5 to June 9, 2026. The workshop, coordinated by Prof. S. China Ramu, Head of the Department, along with Dr. K. Morarjee and Dr. G. Kiran Kumar, Associate Professors, and co-coordinated by Dr. I. Srujana, Smt. Ch. Madhavi Sudha, and Dr. M. Anila, aimed to provide participants with cutting-edge knowledge and practical skills in applying artificial intelligence and machine learning to real-world societal challenges. The organizing committee, comprising

Dr. T. Suvarna Kumari, Smt. S. Durga Devi, Assistant Professors, and Sri P. Ramesh, Programmer of the CSE Department, ensured smooth execution of the program. The workshop featured eminent international and national-level speakers from leading institutions, offering insights into healthcare and agricultural AI applications, ethical and explainable AI practices, and scalable solutions for rural and social development. Participants, including students, research scholars, and industry professionals from institutions worldwide, engaged in intensive sessions designed to equip them with the ability to develop AI models addressing critical societal issues. Overall, 150 participants registered for the workshop, reflecting CBIT's commitment to promoting academic excellence, research, and socially impactful technological innovations.

## CBIT CSE Department Organizes International Workshop on AI & ML for Societal Impact

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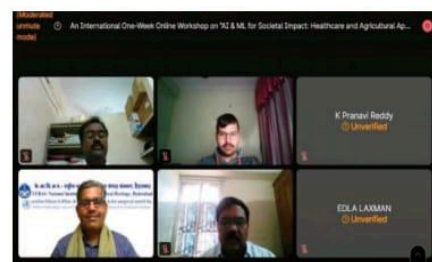
The Department of Computer Science and Engineering (CSE) at CBIT successfully conducted a one-week international online workshop on "AI & ML for Societal Impact: Healthcare and Agricultural Applications", with sessions held from 6th to 12th January 2026.

The workshop aimed to equip participants with cutting-edge knowledge and practical skills in AI and ML for socially impactful applications. Participants learned to apply AI techniques to healthcare and agriculture, design scalable solutions for rural development, and understand ethical and explainable AI practices.

Dr. Saketh Ram Thrigulla

and Dr. Muniraju Naidu Vadamudi attended the validity function as chief guests. Coordinators for the workshop included Prof. S. China Ramu, Dr. K. Morarjee, and Dr. G. Kiran Kumar, along with co-coordinators Dr. I. Srujana, Smt Ch. Madhavi Sudha, and Dr. M. Anila.

The workshop saw participation from 150 students, research scholars, and industry



professionals, including international and national speakers. Organizing committee members ensured smooth execu-

tion, enabling participants to gain expertise in AI & ML applications for societal development.



## Day1 Photographs(05/01/2026)

An International One-Week O... (Moderated unmute mode) Meeting Info 01:29:17

CSE Dept., CBIT CSE Dept., CBIT Dr. Padmaja S Unverified Bandi Parthiv Reddy Unverified

Viewing Dr. Padmaja S's shared content 100% +

**What is AI vs Machine Learning vs Deep Learning?**

The diagram consists of three concentric circles. The outermost circle is blue and labeled 'Artificial Intelligence'. The middle circle is green and labeled 'Machine Learning'. The innermost circle is red and labeled 'Deep Learning'. Arrows point from each circle to a corresponding text box on the right:

- Artificial Intelligence:** Ability of a machine to imitate intelligent human behavior
- Machine Learning:** Application of AI that allows a system to automatically learn and improve from experience
- Deep Learning:** Application of Machine Learning that uses complex algorithms and deep neural nets to train a model

1/5/2026 Workshop: "AI & ML for Societal Impact: Healthcare and Agricultural Applications" 23

Participants (93)

Invite and remind

Participants (93)

- CSE Dept., CBIT Host, me
- Dr. Padmaja S Presenter • Unverified
- 1601 25 805 133 - Zia Khan Unverified
- 160122733047 - MADUPU L... Unverified
- 160123733031 Unverified
- 160123733032 Unverified
- 160123733041\_Arnab Katta Unverified
- 160123733049\_Arslaan Unverified
- 160123733164\_Sahithi Pathem Unverified

Mute all Unmute all

Unmute Start video Share AI Assistant

AN

An International One-Week O... (Moderated unmute mode) Meeting Info 01:04:24

CSE Dept., CBIT Dr. D. L.S.Reddy Unverified Dr. Kolla Morarjee Unverified 160123733164\_Sahit... Unverified Sai shireesha Unverified Dr P Rajeshwari Unverified pradeep Unverified

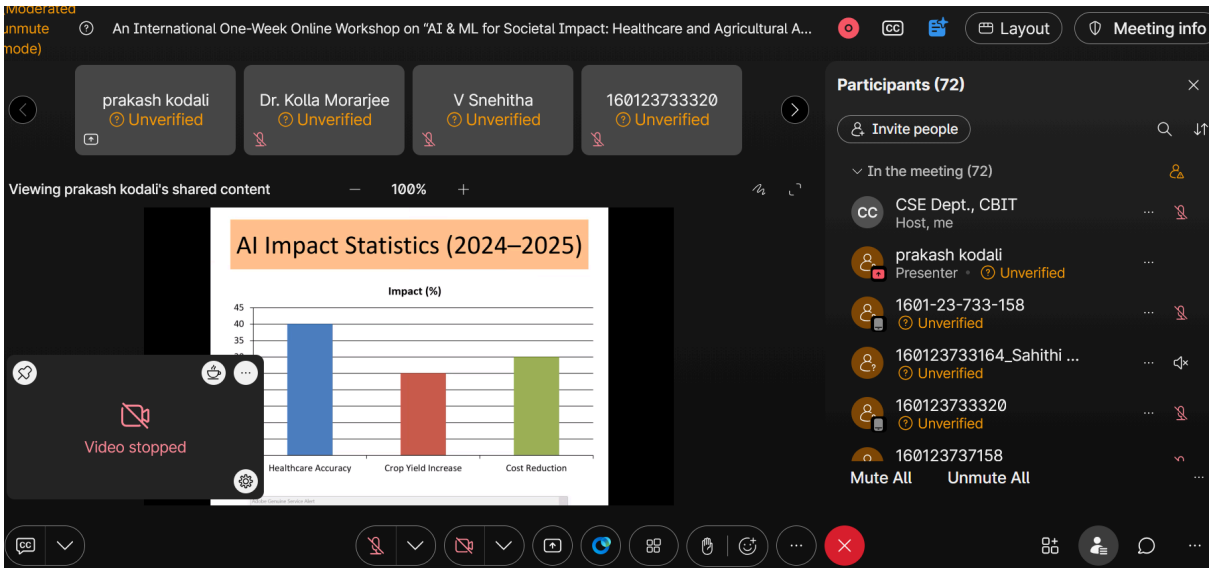
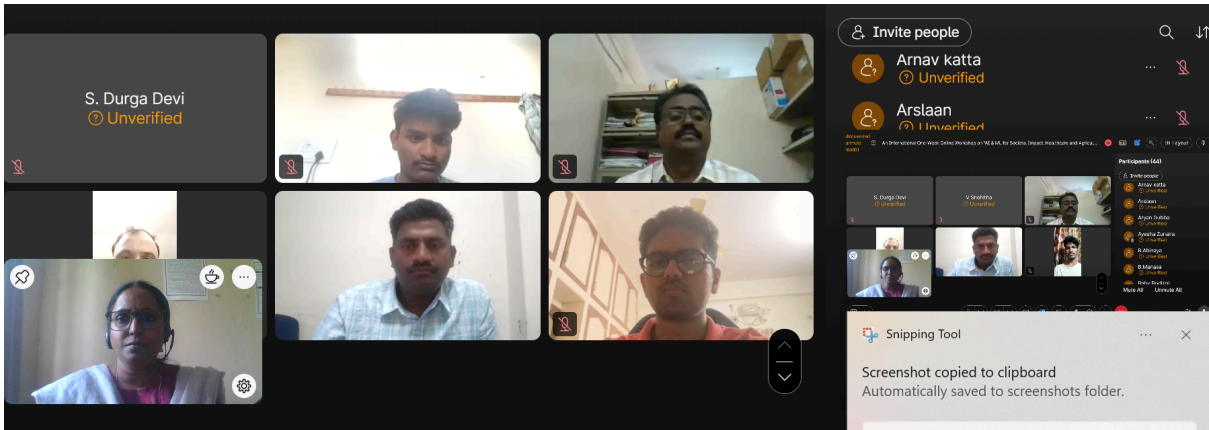
Viewing Dr D. L.S.Reddy's shared content 100% +

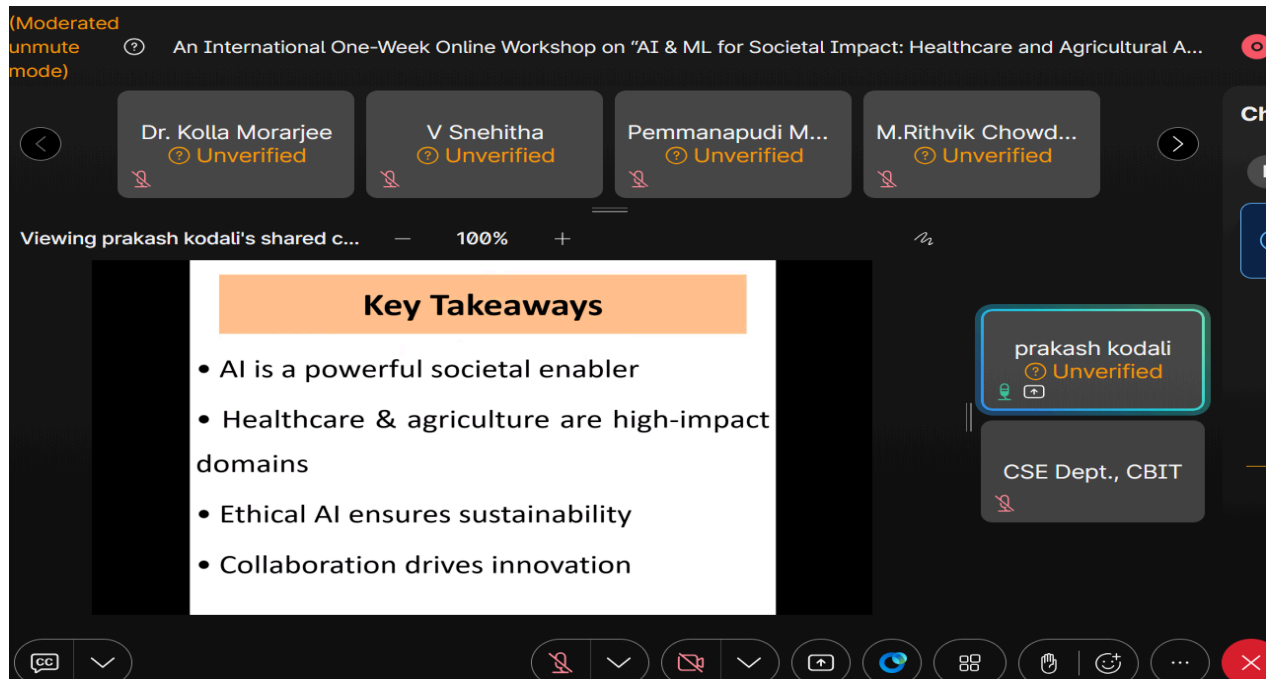
**AI Applications for Agriculture**

The slide is titled 'AI Applications for Agriculture' and lists several key applications:

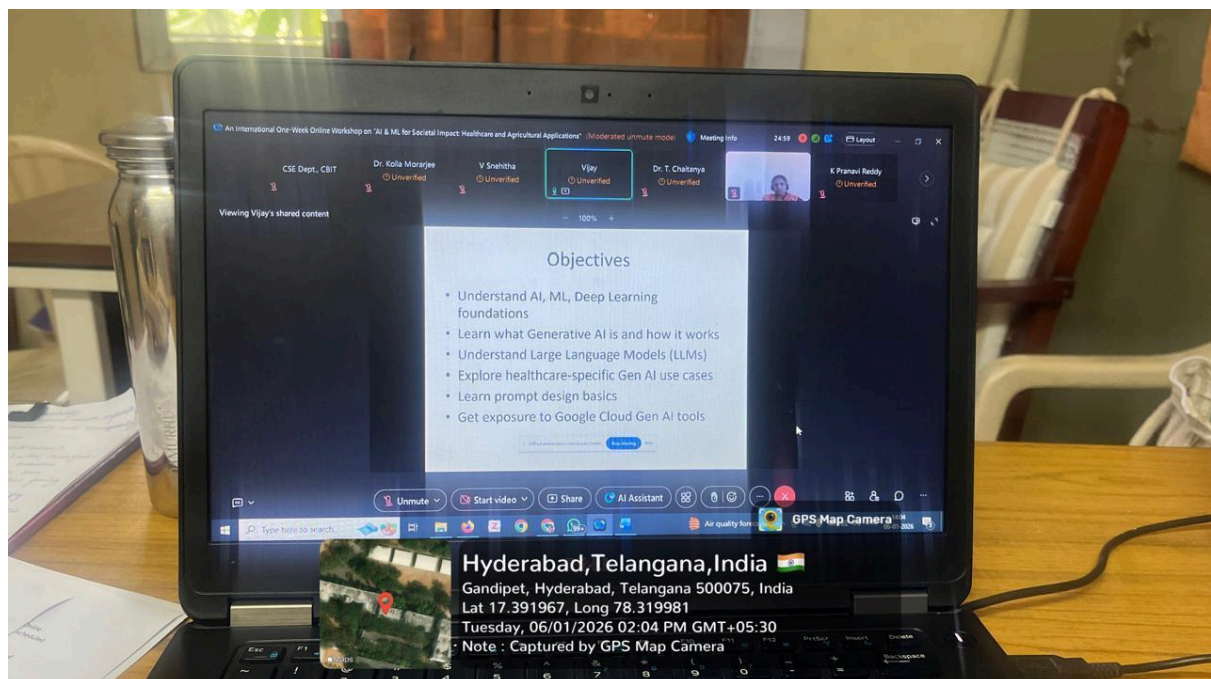
- Key Applications**
- Crop Monitoring**
  - Drones and satellites take images of fields
  - AI detects plant stress, nutrient deficiency, or disease early
- Pest & Disease Detection**
  - Computer vision spots pests or leaf diseases from photos
  - Helps farmers treat only affected areas (less pesticide use)
- Smart Irrigation**
  - AI uses soil moisture + weather data
  - Waters crops only when needed → saves water
- Yield Prediction**
  - AI predicts how much crop will be produced
  - Helps with planning, storage, and pricing
- Autonomous Farming**
  - Self-driving tractors and harvesters
  - Robots for weeding and planting
- Precision Farming**
  - AI decides where, when, and how much to plant, fertilize, or spray
  - Reduces cost and environmental damage

Day2 Photographs(06/01/2026)

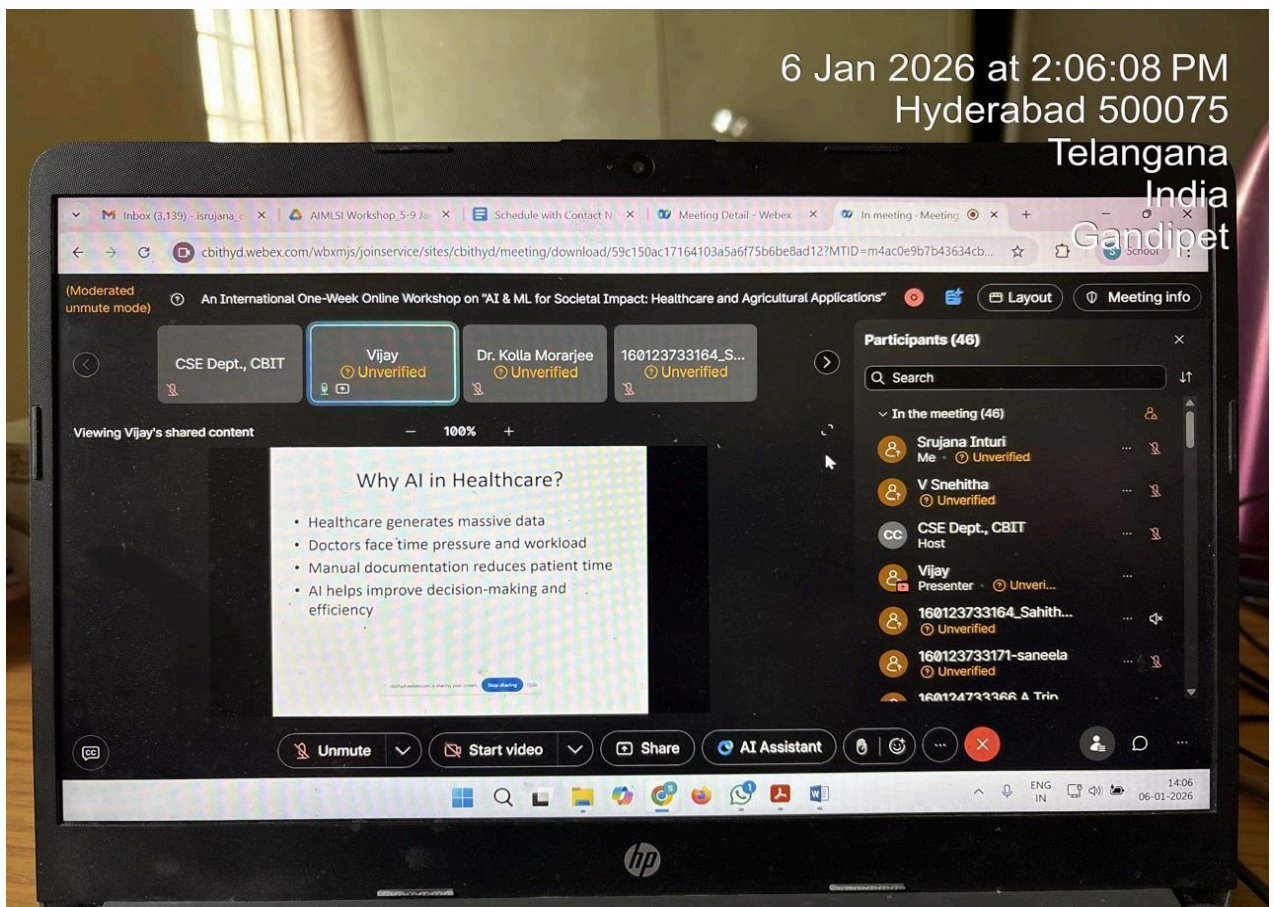
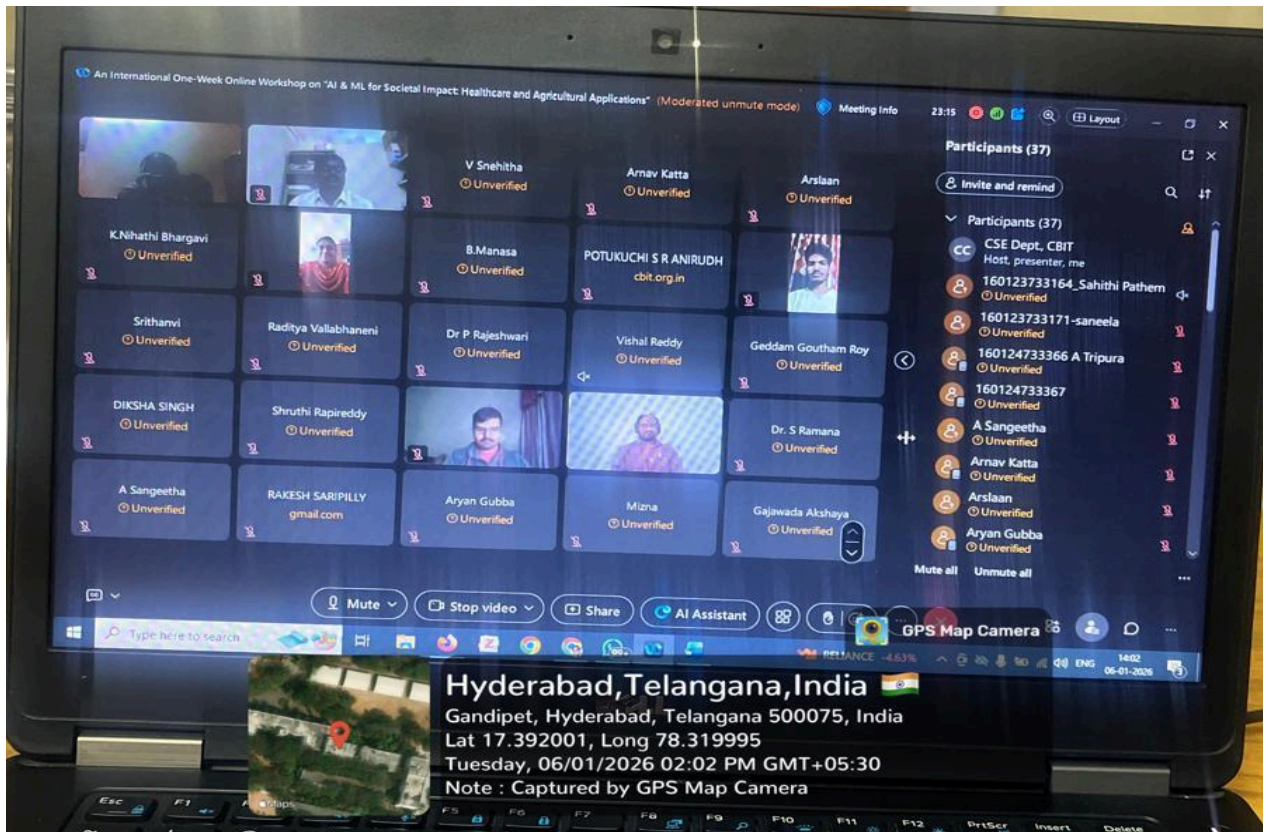




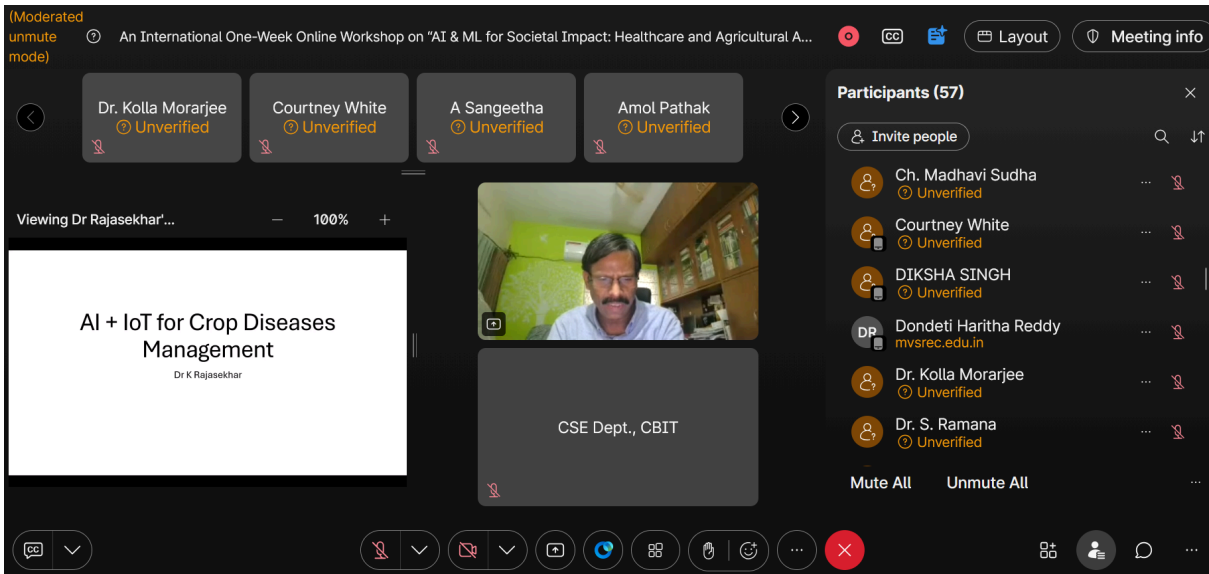
AN







Day-3 Photographs(07/01/2026)



(Moderated unmute mode) An International One-Week Online Workshop on "AI & ML for Societal Impact: Healthcare and Agricultural Applicati...

Dr. Kolla Morarjee Unverified Courtney White Unverified Sandeep Kumar ... Unverified Karanam Thanma... Unverified

Viewing Dr Rajasekhar'... 100%

**Future Directions**

- **Unified AI Frameworks** → multitask models (disease, pests, irrigation, nutrition)
- **Edge-Cloud Collaboration** → hybrid intelligence, dynamic partitioning
- **Closed-Loop Actuation** → drones, automated irrigation, alarms
- **Resilient AI** → self-adaptive, uncertainty-aware models
- **Non-Visual Sensors** → VOC, acoustic, soil electrochemical sensing
- **Synthetic Data & Simulations** → digital twins, AR/VR farm testing
- **Farmer-Centric Design** → multilingual, culturally adaptive, affordable hardware
- **Agri-Cybersecurity & Policy** → IDS, blockchain, data sovereignty, global frameworks

Dr Rajasekhar Unverified

CSE Dept., CBIT

**Participants (72)**

Invite people

- Harshitha Unverified
- MADUPU LOKESH REDDY Unverified
- Baby Bodhini Unverified
- A Sangeetha Unverified
- Thanmayee chakravarthy Unverified
- Ch. Madhavi Sudha Unverified

Mute All Unmute All

AN

In meeting · Meeting · Web: X

cbithyd.webex.com/wbxmjs/joinservice/sites/cbithyd/meeting/download/59c150ac17164103a5a675b...

(Moderated unmute mode) An International One-Week Online Workshop on "AI & ML for Societal Impact: Healthcare and Agricul...

160123733171-Saneela Unverified V Snehitha Unverified

Akula Kalvanram

**Participants (38)**

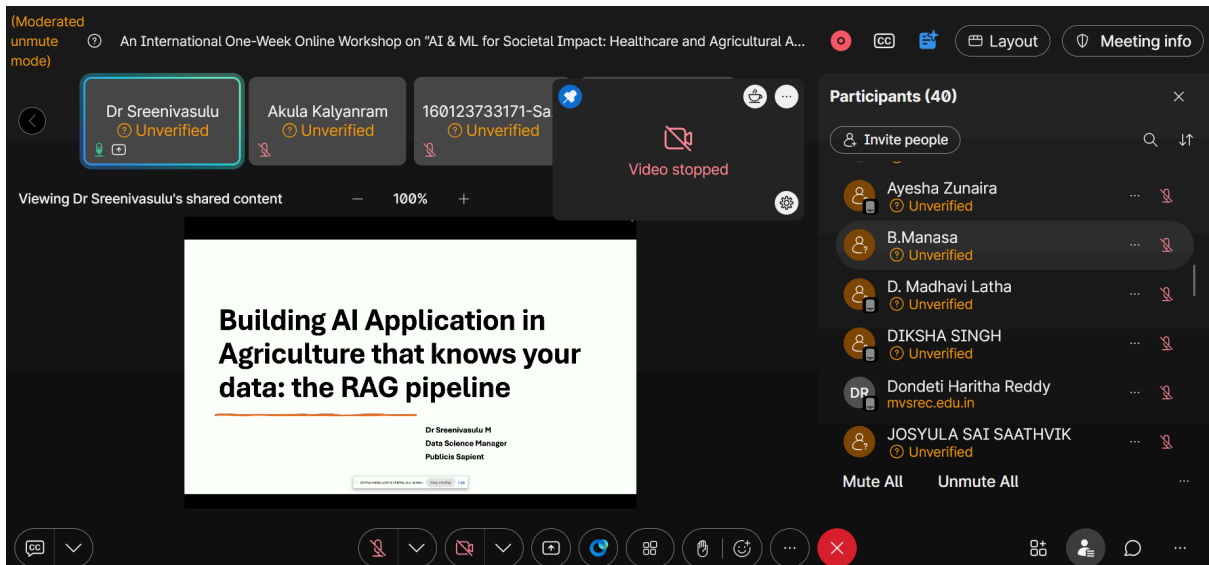
Invite people

- 158 Unverified
- 1601 25 805 133 Zia Khan gmail.com
- 160123733164\_Sahithi ... Unverified
- 160123733171-Saneela Unverified
- 160124733176 Unverified
- 160124733366-Tripura Unverified

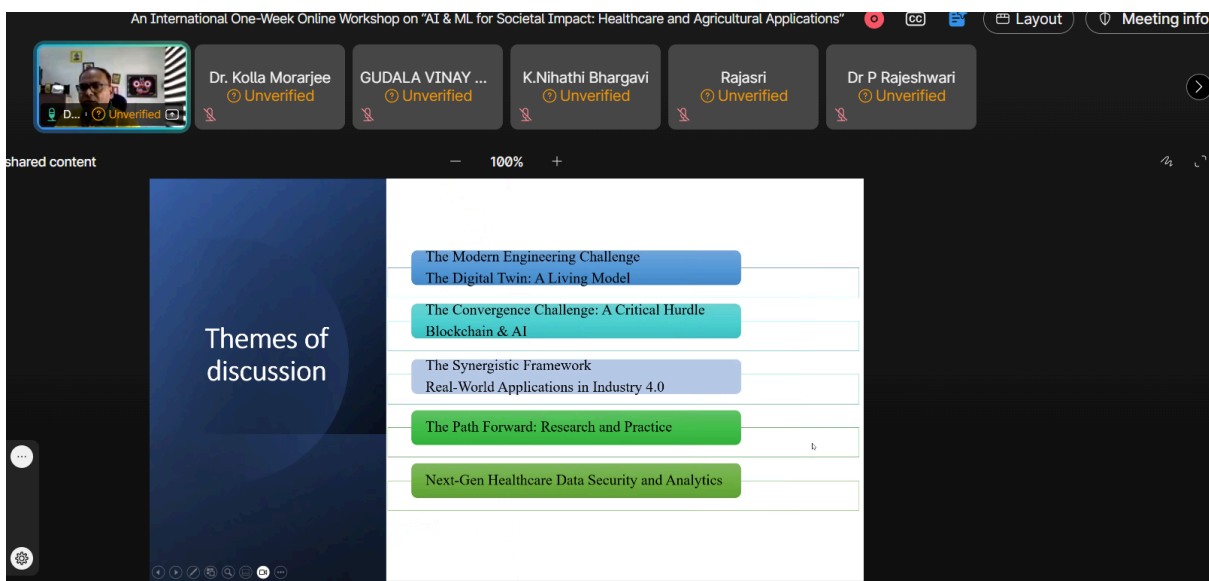
Mute All Unmute All

14:05 07-01-2026





### Day-4 Photographs(08/01/2026)





AN

Moderated unmute mode ⓘ

An International One-Week Online Workshop on "AI & ML for Societal Impact: Healthcare and Agricultural Applications"

LayoutMeeting info

Sateesh Ambesan...  
Unverified

M.Rithvik Chowda...  
Unverified

Firdoes Sultana  
Unverified

Arnav Katta  
Unverified

Amreen Sultana  
Unverified

D. Madhavi Katha,...  
Unverified

Viewing Sateesh Ambesange - PragyanAI's shared content

100%

### AI Agents vs. Agentic AI

The diagram compares two types of AI agents. On the left, 'Tool-using assistants' are represented by a robot icon and include examples like Email replies, Summarization, and Support bots. On the right, 'Orchestrated AI intelligence' is represented by a robot icon and includes examples like Scientific discovery, ICU triage, and Multi-drone coordination.

Video stopped

UnmuteStart videoShareAI AssistantBreakout sessions

Participants (48)

Invite people

Unmuted

Dr. S. Ramana  
Unverified

Dr. T. Chaitanya  
Unverified

Firdoes Sultana  
Unverified

Harshadithya Reddy A...  
Unverified

JOSYULA SAI SAATH...  
Unverified

K.Nihathi Bhargavi  
Unverified

K Pranavi Reddy  
Unverified

Khizer\_160123733060  
Unverified

I OKESH SARTPTI I Y  
Unverified

Mute AllUnmute All

Moderated unmute mode ⓘ

An International One-Week Online Workshop on "AI & ML for Societal Impact: Healthcare and Agricultural Applications"

LayoutMeeting info

Sateesh Ambesa...  
Unverified

M.Rithvik Chowd...  
Unverified

Firdoes Sultana  
Unverified

Arnav Katta  
Unverified

Amreen Sultana  
Unverified

E VINDHYARANI  
Unverified

Viewing Sateesh Ambesange - PragyanAI's shared content

100%

### Physical AI

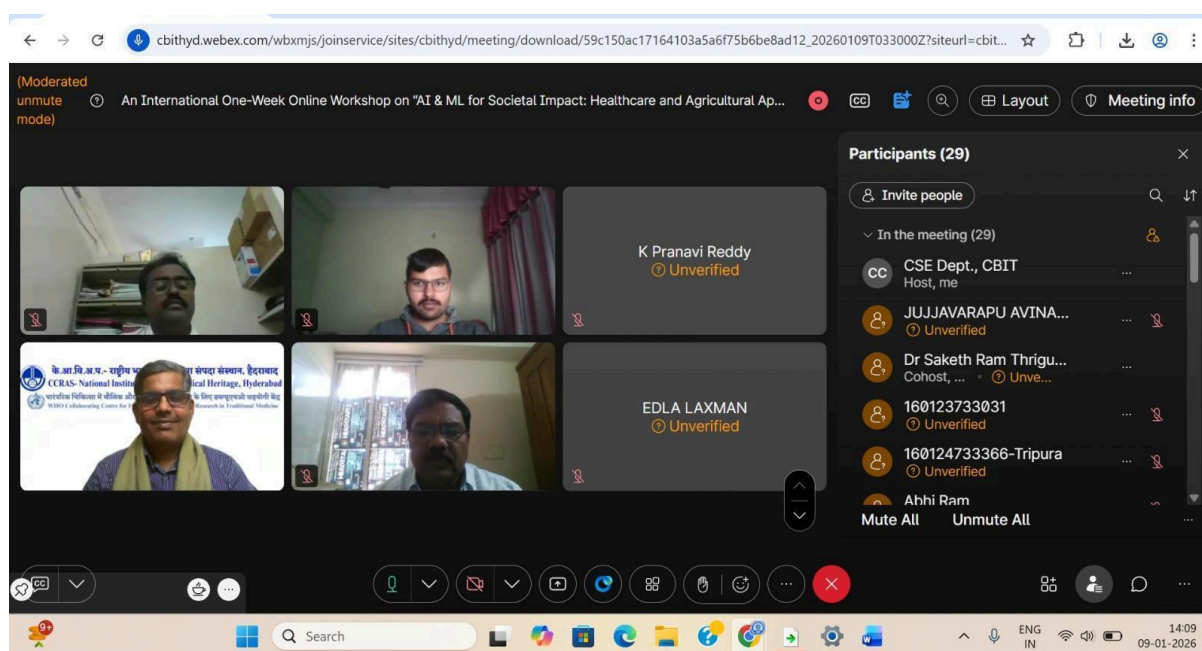
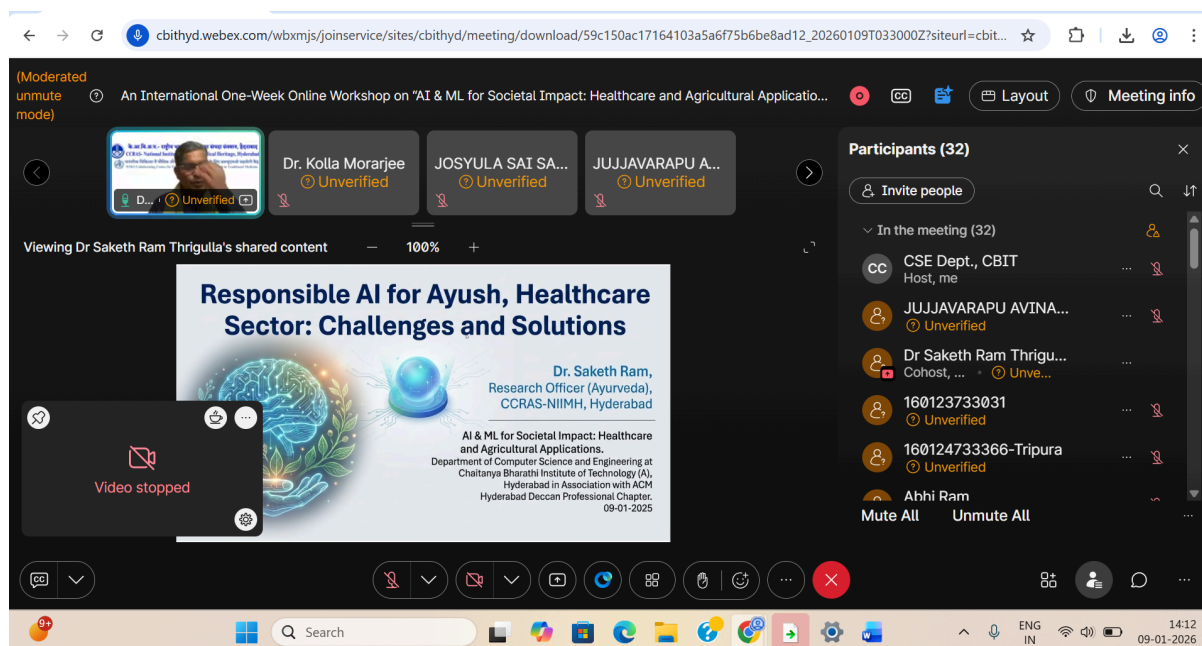
The slide features the USAIL logo (United States Artificial Intelligence Institute) and the title 'Physical AI: The Next Frontier For Artificial Intelligence'. The background image shows several white humanoid robot heads.

Video stopped

UnmuteStart videoShareAI AssistantBreakout sessions

## Day-5 Photographs(09/01/2026)

FN

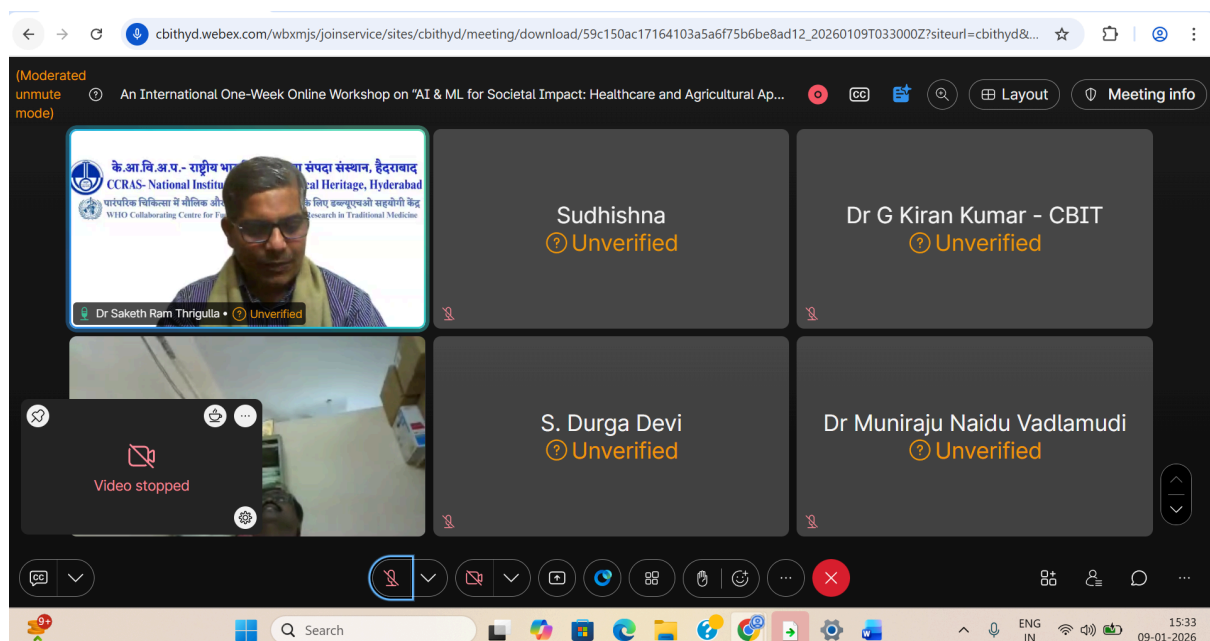
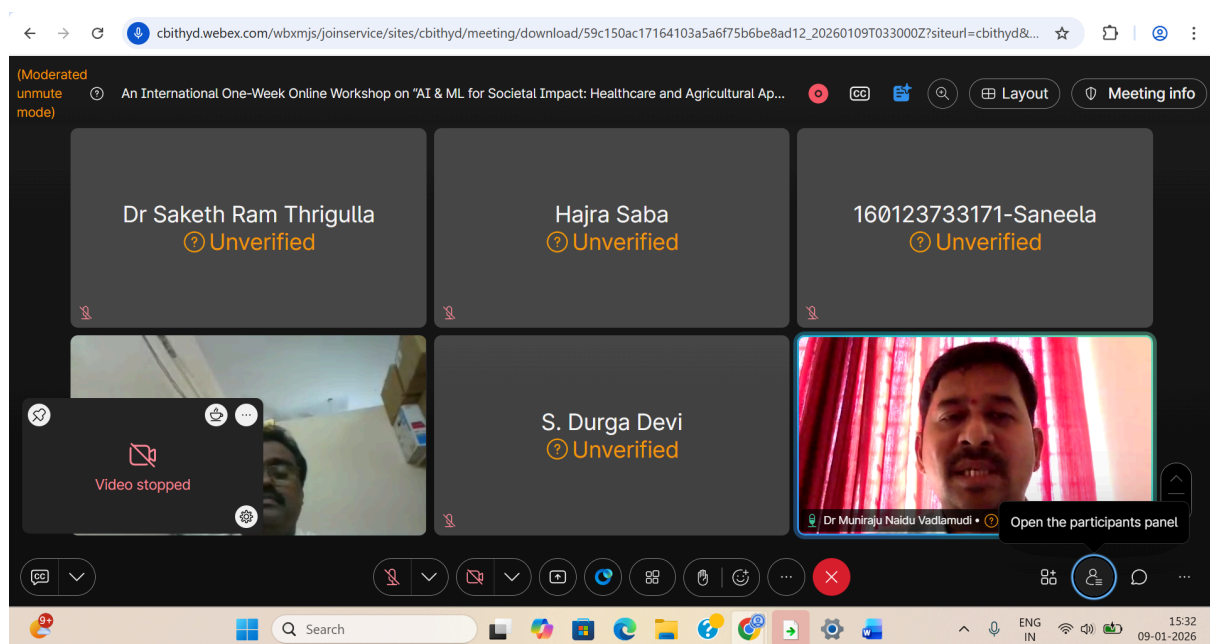


## Valedictory

The Department of CSE has successfully organized International One-Week Online Workshop on “AI & ML for Societal Impact: Health care and Agricultural Applications

Speakers and Chief guest for the validatory function was Dr. Saketh Ram Thrigulla and Dr. Muniraju Naidu Vadlamudi Overall, 150 participants registered for this and actively participated. Dr. M. Anila hosted the Validatory session and Participants from different colleges have given their valuable feedback .The Coordinators for this International Workshop is Prof S. China Ramu, Dr. K. Morarjee and Dr. G.Kiran Kumar, Associate

Professors, Co-coordinators are Dr. I. Srujana, Smt Ch.Madhavi Sudha, and Dr. M. Anila Assistant Professors of CSE Department, Organizing Committee Members are Dr.T.Suvarna Kumari, Smt S.Durga Devi, Assistant Professors Sri P.Ramesh Programmer of CSE Department. The workshop has International and national level Speakers from Institutions. This intensive program aimed to equip participants with cutting-edge knowledge and practical skills in the rapidly evolving field of AI & ML for Societal Impact: Health care and Agricultural Applications The program is designed to benefit students, researchers, and professionals interested in socially impactful AI and ML advancements. Participants will be able to: Apply AI & ML techniques to real societal problems Develop healthcare and agricultural AI models Understand ethical and explainable AI practices Design scalable AI solutions for rural and social development. Overall, 150 participants registered for this International Workshop, comprising students, Research scholars, and Industry Professionals from various institutions and organizations worldwide.



## FeedBack as Follows

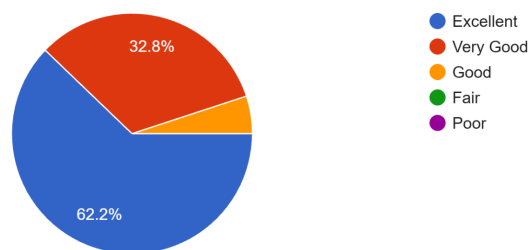
The feedback collected from participants of the *AI & ML for Societal Impact* program reflects a highly positive response across all evaluation parameters. The majority of participants expressed strong satisfaction with the quality of instruction, clarity of presentation, and the overall usefulness of the program.

The facilitator's expertise, clarity of instruction, and the relevance of the content contributed significantly to the program's success. Minor scope exists for enhancing interactivity, which may further improve participant engagement in future sessions.

### The Following Questionnaire and Responses from participants

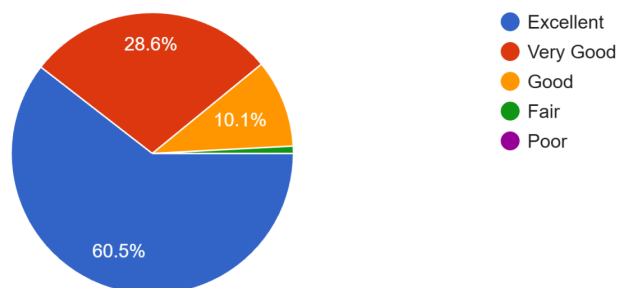
The facilitator was knowledgeable about the topic.

119 responses



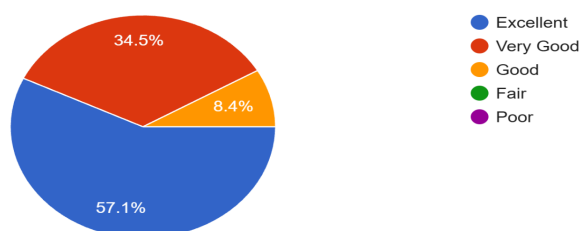
The session was interactive and engaging.

119 responses



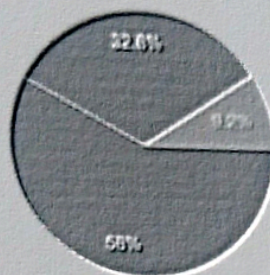
The presentation was clear and informative

119 responses



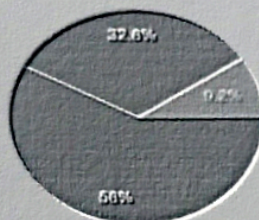


I am encouraged to use what I learnt in this program  
119 responses



- Excellent
- Very Good
- Good
- Fair
- Poor

I am encouraged to use what I learnt in this program  
119 responses



- Excellent
- Very Good
- Good
- Fair
- Poor

#### Coordinators:

1. Prof. S China Ramu, Professor, Department of CSE, CBIT
2. Dr. Kolla Morarjee, Associate Professor, Department of CSE, CBIT
3. Dr. G Kiran Kumar, Associate Professor, Department of CSE, CBIT

*S. China Ramu*  
*Dr. Kolla Morarjee*  
*Dr. G Kiran Kumar*

#### Co-ordinators:

1. Dr. I Srujana, Assistant Professor, Department of CSE, CBIT
2. Smt. Ch Madhavisudha, Assistant Professor, Department of CSE, CBIT
3. Dr. M Anila, Assistant Professor, Department of CSE, CBIT

*Dr. I Srujana*  
*Smt. Ch Madhavisudha*  
*Dr. M Anila*

*Thanks for your kind  
co-operation and contribution  
S. China Ramu*

Professor and Head Department  
Department of Computer Science & Engineering  
Chaitanya Bharathi Institute of Technology (A)  
Gandipet, Hyderabad-500 075.(T.S.)





Date: 15.12.2025

## **Departments of Computer Science and Engineering & Information Technology**

A brief report on the **2nd International Conference on Innovative Computing Technologies (ICICT-2025)**, organized in hybrid mode on 12.12.2025 and 13.12.2025 by the Department of Computer Science and Engineering & Department of Information Technology at Chaitanya Bharathi Institute of Technology (CBIT), Gandipet, Hyderabad.

The two-day international conference provided a vibrant platform for academicians, researchers, industry professionals, and students to exchange ideas and discuss recent advancements in innovative computing technologies. The event witnessed enthusiastic participation and strong academic engagement.

The conference featured an inspiring keynote address by Mr. A. Vijay Siddhiraju, Director – Architecture and AI Technologies, who shared valuable insights on emerging trends, industry-driven innovations, and the evolving role of Artificial Intelligence in modern computing systems. A total of four sessions were conducted for the presentation of articles. The technical sessions were effectively chaired by eminent academicians: Prof. K. Supreethi, Professor & Head, CSE, JNTUH, Hyderabad, Dr. Suresh Reddy, Professor & Head, CSE, VNRVJIET, Hyderabad Dr. T Panduranga Vital, Professor, Aditya Institute of Technology and Management, Tekkali, AP, and Dr. Prasanth, Assoc. Professor, IT Dept, Vasavi College of Engineering, Hyderabad. Their guidance and constructive feedback enriched the technical discussions and paper presentations.

A total of 139 papers were received across five tracks, viz. Artificial Intelligence and Machine Learning, Data Science and Analytics, Smart Systems, Quantum Computing and Emerging Technologies, Distributed, Networking, Communication, and Security, Image Processing, Computer Vision, IoT and Robotics, High Performance, Cloud, and Green Computing of which 72 papers were accepted based on reviewers' comments. '31' high-quality research papers were presented across four technical sessions. A total of 32 reviewers were involved in evaluating the submitted papers. All articles underwent a double-blind peer-review process.

The conference covered diverse domains of innovative computing, AI, data science, and emerging technologies. The conference was steered by the General Chairs: Prof S. China Ramu Professor & Head, CSE Dept., Prof M. Venugopala Chari, Professor & Head, IT Dept, Prof R. Ravinder Reddy, Professor, CSE Dept. and supported by Co-Chairs: Dr. M. Venkata Krishna Reddy, Asst. Professor, CSE Dept.& Dr. Jayaram D, Asst. Professor, IT Dept. Their leadership ensured the smooth conduct and academic success of the conference.

In recognition of outstanding research contributions, Three Best Paper Awards were presented to authors (Paper ID: 29- VNRVJIET, Paper ID: 150-CBIT, Paper ID: 114-VCE), whose work demonstrated originality, technical depth, and practical relevance. The successful completion of ICICT-2025 reflects CBIT's continued commitment to promoting research excellence, innovation, and global academic collaboration in the field of computing technologies.

**Tracks:**

1. Artificial Intelligence and Machine Learning, Data Science and Analytics.
2. Smart Systems, Quantum Computing and Emerging Technologies.
3. Distributed, Networking, Communication, and Security.
4. Image Processing, Computer Vision, IoT and Robotics.
5. High Performance, Cloud, and Green Computing

**Technical Paper Presentation Sessions:**

Session	External Session Chair	Internal Session Chair	Session Coordinator
1A	Dr. S.K. Prasanth	Dr. T. Sridevi	Smt. K. Deepthi
1B	Prof. G. Suresh Reddy	Dr. B. Veera Jyothi	Dr. Ramu Kuchipudi
2A	Prof. K. P. Supreethi	Dr. V. Padmavathi	Smt. A. Sangeetha
2B	Dr. Panduranga Vital Terlapu	Dr. E. Padmalatha	Smt. S. Durga Devi

**Snapshots of the Conference ICICT 2025****Formal Inaugural Ceremony:**

Smt. G Shanmuki Rama, Assistant Professor, Dept. of CSE hosting the inaugural event





Welcome Address about the Conference ICICT2025 by Prof. S. China Ramu,  
Professor & Head, CSE Dept. General Chair of the Conference

**Keynote Address:**

**Speaker:** Sri. A. Vijay Siddhiraju, Director – Architecture and AI Technologies



Welcoming Keynote Speaker Sri. A. Vijay Siddhiraju, Director – Architecture  
and AI Technologies





Speaker delivering the Keynote Session



Participants attending the Keynote Session





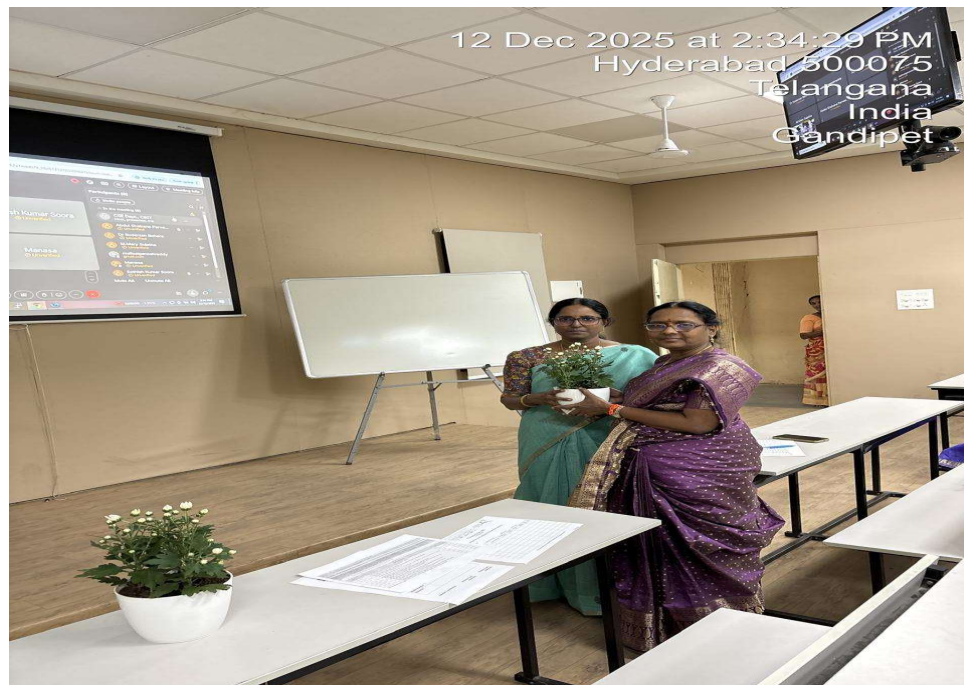
Felicitations of the Keynote Speaker, Sri. Vijay Siddiraju

## Technical Paper Presentation Sessions

### Session 1A:



Welcoming Session Chair, Dr. Prasanth, Assoc. Professor, IT Dept., Vasavi College of Engineering, Hyderabad

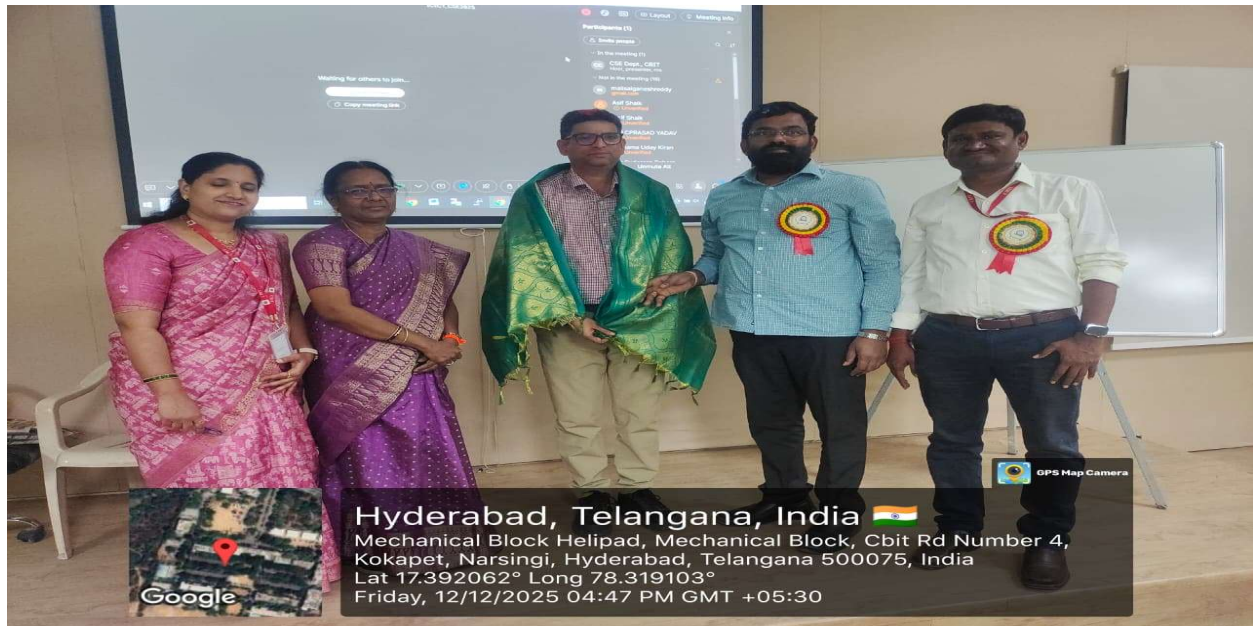


Welcoming Session Chair, Dr. T. Sridevi, Assoc. Professor, CSE Dept.,  
Chaitanya Bharathi Institute of Technology, Hyderabad



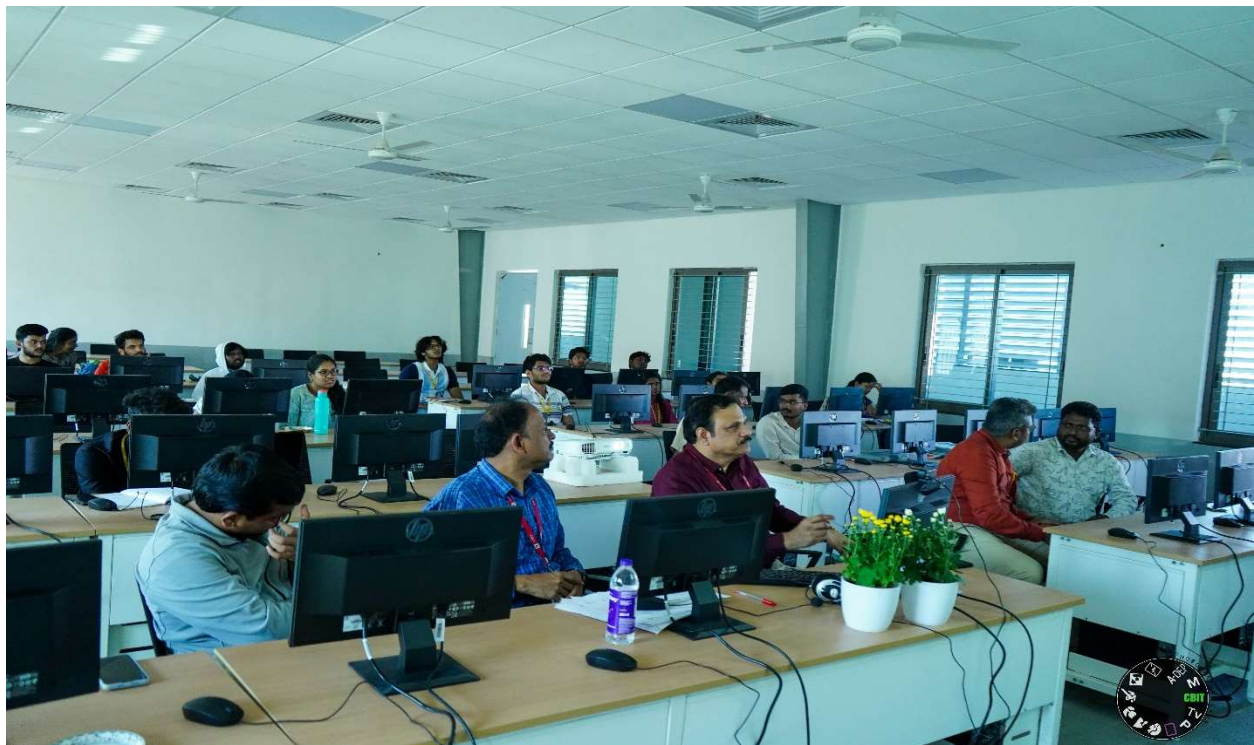
Participants from Paper ID : 29, VNRVJIET presenting their presentation  
during the Session.





Felicitating Session Chair, Dr Prasanth, Assoc. Professor, IT Dept., Vasavi College of Engineering, Hyderabad.

### Session 1B:



Session Chair, Prof. G. Suresh Reddy, Professor & Head, IT Department, VNR Vignana Jyothi Institute of Technology, Hyderabad



Participants presenting their presentation during the Session.

## Session 2A:



Welcoming Session Chair, Prof. Supreethi K P, Professor & Head, CSE Dept., JNTUHCEST, Hyderabad





Welcoming Session Chair, Dr. V Padmavathi, Assoc. Professor, CSE Dept.,  
 Chaitanya Bharathi Institute of Technology, Hyderabad



Participants from CVR College of Engineering presenting their presentation  
 during the Session.





Felicitating Session Chair, Prof. Supreethi K P, Professor & Head, CSE Dept., JNTUHCEST, Hyderabad.

**Session 2B:**



Welcoming Session Chair, Prof. T Panduranga Vital, Professor, CSE Dept., Aditya Institute of Technology and Management, Tekkali, AP





Welcoming Session Chair, Dr. E Padmalatha, Assoc. Professor, CSE Dept.,  
Chaitanya Bharathi Institute of Technology, Hyderabad



Participants presenting their presentation during the Session.



Felicitating Session Chairs of the Session

**Enclosed:**

- Conference Brochure Flyer
- Conference Flyer
- Keynote Speaker Profile
- Keynote Attendance Sheets
- List of Session Chair and Coordinators
- Technical Sessions Schedule
- List of Reviewers
- Best papers Awarded
- List of Registered Papers
- List of Accepted Papers
- List of Total Papers Received
- Income & Expenditure
- List of Organizing Committee
- Sample certificates



**Co-Chair**



1. Dr. M. Venkata Krishna Reddy  
Asst. Professor, Dept. of CSE



2. Dr. D. Jayaram  
Asst. Professor, Dept. of IT



5/1/26

**PROFESSOR & HEAD**  
Department of Information Technology  
Chaitanya Bharathi Institute of Technology (A)  
Gandipet, Hyderabad-500 075. Telangana



**General Chair & SPOC**

Prof. R. Ravinder Reddy  
Professor, Dept. of CSE

*For di for you to info.*  
*S. Chaitanya*

**Professor and Head Department**  
Department of Computer Science & Engineering  
Chaitanya Bharathi Institute of Technology (A)  
Gandipet, Hyderabad-500 075.(T.S.)



**CHAITANYA BHARATHI  
INSTITUTE OF TECHNOLOGY**  
An Autonomous Institute | Affiliated to Osmania University  
Kokapet Village, Gandipet Mandal, Hyderabad, Telangana-500075, [www.cbti.ac.in](http://www.cbti.ac.in)



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RESEARCH,  
INNOVATION AND  
EDUCATION

**47**  
years

## **2<sup>nd</sup> International Conference on Innovative Computing Technologies (ICICT-2025)**

**(<https://icict.co.in>)**

**12<sup>th</sup> – 13<sup>th</sup> December 2025**

**Department of Computer Science and Engineering &  
Department of Information Technology**

**Press Note & Media Coverage**





# ఐసిఐటి 2025 గోడ పత్రిక విడుదల

**హైదరాబాద్ , సెప్టెంబర్ 01, న్యూస్మేట్ :** చైతన్య భారతీ ఇన్స్టిట్యూట్ ఆఫ్ టెక్నాలజీ , హైదరాబాద్, లో 2వ అంతర్జాతీయ కాన్ఫరెన్స్ ఆన్ ఇన్నోవేటివ్ కంప్యూటింగ్ టెక్నాలజీస్ (ఐసిఐటి 2025) పోస్టర్ను ఈ రోజు కళాశాల ప్రాంగణంలో విడుదల చేశారు. డిసెంబర్ 12 -13, 2025 తేదీలలో హైబ్రిడ్ మోడ్లో నిర్వహించబడుతున్న ఈ సదస్సు, కంప్యూటర్ సైన్స్ అండ్ ఇంజనీరింగ్ మరియు ఇన్ఫర్మేషన్ టెక్నాలజీ విభాగాల ఆధ్వర్యంలో జరుగుతుంది.

ఈ సదస్సు లో పరిశోధకులు, పరిశ్రమ నిపుణులు, విద్యార్థులు కలిసి కృత్రిమ మేధస్సు, యంత్ర అభ్యాసం, డేటా సైన్స్, క్వాంటమ్ కంప్యూటింగ్, ఐఓటి, రోబోటిక్స్, నెట్వర్కింగ్, సెక్యూరిటీ, హై-పర్ఫార్మెన్స్ కంప్యూటింగ్ వంటి ఆధునిక సాంకేతిక రంగాలలో తాజా పరిణామాలను చర్చించుకో నున్నారు. పోస్టర్ ఆవిష్కరణ కార్యక్రమంలో సీబీఐటీ ప్రిన్సిపల్ ప్రొఫెసర్ సి. వి. నరసింహులు గారు, సి.ఎస్.ఇ. విభాగాధిపతి ప్రొఫెసర్ ఎస్. చిన రాము గారు, ఐటీ విభాగ ఇన్ఛార్జ్ హెడ్ ప్రొఫెసర్ ఎం. వేణుగోపాలచారి గారు, వైస్ ప్రిన్సిపల్స్ డాక్టర్ పి. వి. ఆర్. రవీంద్రరెడ్డి మరియు డాక్టర్ కె. కృష్ణవేణి, లైబ్రేరియన్ డాక్టర్ సి. శ్రీకాంత్ రెడ్డి, మరియు వివిధ విభాగాల అధ్యాపకులు పాల్గొని, సదస్సును విజయవంతం చేయడానికి శ్రమిస్తున్న నిర్వాహక బృందం కృషిని అభినందించారు. సదస్సులో అంగీకరించబడిన మరియు ప్రదర్శించబడిన అన్ని పరిశోధన



**CHAITANYA BHARATHI  
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RESEARCH,  
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**46**  
years

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**ICICT-2025**  
December 12-13, 2025

**2<sup>nd</sup> International Conference on  
Innovative Computing  
Technologies (ICICT)**

**Call  
for  
Papers**

**Organized by Departments of CSE and IT**

**TRACKS OF THE CONFERENCE**  
(but not limited to)

- > Artificial Intelligence and Machine Learning, Data Science and Analytics.
- > Smart Systems, Quantum Computing and Emerging Technologies.
- > Distributed, Networking, Communication, and Security.

- > Image Processing, Computer Vision, IoT and Robotics.
- > High Performance, Cloud, and Green Computing

**IMPORTANT DATES**

<p>Submission of the paper 15<sup>th</sup> October 2025</p>	<p>Acceptance of the Paper 8<sup>th</sup> November 2025</p>	<p>Camera Ready Paper submission and registration 19<sup>th</sup> November 2025</p>
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Scopus





<p>Scan for Paper Submission Link</p>	<p>Scan for Payment and Registration</p>	<p>All presented papers will be published and indexed in Scopus and Web of Science</p>	<p>Scan to visit ICICT 2025 Website <a href="http://icict.cbti.ac.in">http://icict.cbti.ac.in</a></p>
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**Submission Link:**  
<https://eml3.research.microsoft.com/CBITICICT2025>

**For any queries:**  
[icict2025@cbti.ac.in](mailto:icict2025@cbti.ac.in)

పత్రాలు బెంధమ్ సైన్స్ బుక్స్ 'పూచర్ సిరీస్' లో ప్రచురించబడతాయి. పేపర్ సమర్పణకు చివరి తేదీ అక్టోబర్ 15, 2025, మరియు రిజిస్ట్రేషన్ వివరాలు కళాశాల వెబ్ సైట్ లో పొందు పరిచారు.

# ICICT–2025 Concludes Successfully at CBIT with High-Quality Research Deliberations



DECCAN NEWS SERVICE  
■ HYDERABAD

Chaitanya Bharathi Institute of Technology (CBIT), Gandipet, Hyderabad, successfully hosted the 2nd International Conference on Innovative Computing Technologies (ICICT–2025) on 12th and 13th December 2025. Organized jointly by the Departments of Computer Science & Engineering and Information Technology, the two-day conference provided a vibrant platform for academicians, researchers, industry professionals, and students to exchange ideas and discuss advancements in computing technologies.

The conference featured a keynote address by Mr. A. Vijay Siddhiraju, Director – Architecture and AI Technologies, who shared insights on emerging trends, industry-driven innovations, and the evolving role of Artificial Intelligence in modern computing systems.

Technical sessions were chaired by distinguished academicians, including Prof. K. Supreethi (JNTUH), Dr. Suresh Reddy (VNRVJiet), Prof. T. Panduranga Vital (Aditya Institute of Technology and Management), and Dr. Prasanth (Vasavi College

of Engineering). Their expert guidance and feedback enriched the discussions and research presentations.

## Conference Highlights

**Number of Tracks:** 4

**Papers Presented:** 33 high-quality research papers

**Domains Covered:** Innovative computing, AI, data science, and emerging technologies

The conference was led by General Chairs Prof. S. China Ramu, Prof. M. Venugopala Chari, and Prof. R. Ravinder Reddy, with support from Co-Chairs Dr. M. Venkata Krishna Reddy and Dr. Jayaram D, ensuring smooth organization and academic success.

Outstanding research contributions were recognised through Three Best Paper Awards, presented to authors from VNRVJiet, CBIT, and Vasavi College of Engineering, highlighting originality, technical depth, and practical relevance.

The successful conclusion of ICICT–2025 underscores CBIT's commitment to fostering research excellence, innovation, and global academic collaboration in computing technologies, reinforcing its position as a hub for cutting-edge research and knowledge exchange.







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46  
years



## Report on A Two-Week Online Summer School on “Generative AI and Large Language Models”

19<sup>th</sup> May, 2025 – 30<sup>th</sup> May, 2025 Organized by **Department of Computer Science and Engineering** In Association with **IEEE Hyderabad Section Computer Society Chapter**  
**Brochure**

### ABOUT CBIT (AUTONOMOUS)

Chaitanya Bharathi Institute of Technology is one of the premier Engineering Colleges in the self-financing category in the state of Telangana established in the year 1979. The college offers 11 UG and 10 PG Programmes. The Institute has become Autonomous under UGC w.e.f. 2013-14. UG Programmes are accredited by NBA in the year 1998, 2004, 2008, 2013, 2017, 2021 and Five PG Programmes have been accredited by NBA in 2020. The Institute is accredited by NAAC with CGPA of 3.59 on seven-point scale at 'A++' grade in 2023 for five years. CBIT (A) ranked in the rank band 150-200 in Engineering Category under National Institutional Ranking Framework (NIRF), Govt. of India, MHRD. The College Campus is spread across 50 acres.



### ABOUT CSE DEPARTMENT

The Department of CSE was started in the year 1985 with an intake of 20. The intake was gradually increased to 300 with five sections. Department started M. Tech. program in the year 2002 and currently running with an intake of 24. CSE Department is a recognised research center under Osmania University. B.E. (CSE) Program was accredited by the NBA for the first time in the year 1998 with 'A' grade for 3 years and being successfully accredited.

The Department has committed and well qualified staff. The faculty is active in publishing their research work in various Conferences / Journals. It has been conducting various workshops and certification programs including

Microsoft and IBM professional activities in collaboration with CSI, ISITE along with student branches of IEEE and CSI.

### ABOUT THE WORKSHOP

This workshop on Generative AI Fundamentals and Applications offers a comprehensive exploration of the foundational concepts, models, and real-world implementations of Generative AI. Participants will gain a deep understanding of generative models such as GANs, VAEs, and Transformers, and learn how they power innovations across text, image, and application domains. Participants will learn to:

- Develop and deploy AI-powered applications using LangChain and Retrieval-Augmented Generation (RAG)
- Explore Diffusion models in generative vision applications
- Leverage cloud platforms like AWS, Azure, and Google Vertex AI for scalable AI solutions
- Use ChatGPT for productivity, coding, content generation, and customer service
- Apply Prompt Engineering and Parameter-Efficient Fine-Tuning (PEFT) for optimising LLM performance

### WORKSHOP CONTENTS

- Generative AI Fundamentals and Applications
- GANs and VAEs
- Python with Generative AI and Applications of GANs and VAEs
- Attention Mechanism and Transformer-based Generative Models
- Large Language Models (LLMs)
- Experiment with OpenAI's GPT models for Text Generation and Classification
- Case Study: Generative AI for Personalized Learning
- GenAI for Vision
- Prompt Engineering and Parameter-Efficient Fine-Tuning (PEFT)



**CHAITANYA BHARATHI  
INSTITUTE OF TECHNOLOGY**  
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**Department of Computer Science  
and Engineering**

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Is Organizing

**A Two-Week online Summer School**  
on

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**Chaitanya Bharathi Institute of Technology**  
(Autonomous)

Affiliated to Osmania University.

Accredited by NAAC A++.

Kokapet(V), Gandipet(M), Hyderabad-75,  
Telangana State, India.

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**Joint Staff of CSE**

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**Resource Persons**

- **Dr. Sripurna Saha**  
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- **Dr. Chalavadi Vishnu**  
Assistant Professor, Department of CSR, IIT Tirupati
- **Prof. Gunjan Maramingh**  
Professor, Department of Computing, The University of the West Indies, Kingston, Jamaica
- **Dr. Shirina Sazween**  
Associate Professor, College of Computer and Information Sciences, Majmaah University, Al Majmaah, Saudi Arabia
- **Dr. Lev Kumar**  
Assistant professor, Department of Computer Engineering, NIT Kozhikode
- **Dr. Sreenivasulu Madhuketty**  
Manager-Data Science, Publicis Sapient, Hyderabad
- **Sri Srinivas Mallampati**  
Founder & CEO TechyBase EduCon Private Ltd.
- **Sri Satish Ambekar**  
CEO, Pragyan- AI, Bengaluru
- **Dr. D. L. S. Reddy**  
Associate Professor, Department of AIDS, CBIT
- **Dr. B. Swathi Sanyas**  
Assistant Professor, Department of IT, CBIT

**Intended Participants**

Faculty, Research Scholars, Students, and Industry Professionals.

**Registration fee:**

- Rs. 200 for Faculty
- Rs. 150 for Research Scholars & Students
- Rs. 400 for others

90% Attendance is mandatory for receiving FDP

**Participation Certificate****QR Code for Payment:****Registration Link:**

<https://forms.gle/pUht036sHgTVrh6i8>

Last Date for Registration: 17-05-2025

For Registration & Other Details

Contact: Dr. M. Anila

Mobile No: +919582378201

Email ID: anila\_cse@iitb.ac.in



**CHAITANYA BHARATHI  
INSTITUTE OF TECHNOLOGY  
(Autonomous)**

**A Two-Week online Summer School**

ON

**"Generative AI and Large Language  
Models"**

**19<sup>th</sup> May, 2025 – 30<sup>th</sup> May, 2025**

**Registration Form**

1. Name: .....
2. Highest Qualification: .....
3. Designation: .....
4. Organization: .....
5. Address: .....
6. Mobile No: .....
7. Email ID: .....

Signature of the Participant      Signature of the Sponsoring Authority



### Schedule

<b>Day wise</b>	<b>10.00AM to 11:30 AM</b>	<b>02:00PM to 03:30PM</b>
<b>Day 1</b> <b>19/05/2025</b>	Generative AI Fundamentals and Applications  <b>Sri. Sateesh Ambesange</b> <b>CEO, PragyanAI, Bangalore</b>	Python with Generative AI and Capstone Project orientation  <b>Sri. Sateesh Ambesange</b> <b>CEO, PragyanAI, Bangalore</b>
<b>Day 2</b> <b>20/05/2025</b>	GANs and VANS  <b>Dr. Shirina Samreen,</b> <b>Associate Professor,</b> <b>College of Computer and</b> <b>Information Sciences,</b> <b>Majmaah University, Al</b> <b>Majmaah,</b> <b>Saudi Arabia</b>	Applications of GANs and VANS  <b>Dr. Chalavadi Vishnu</b> <b>Assistant Professor</b> <b>Department of CSE,</b> <b>IIT Tirupati</b> <b>E-mail:</b>
<b>Day 3</b> <b>21/05/2025</b>	Attention Mechanism and Transformer-based Generative Models <b>Dr. B Swathi Sowmya</b> <b>Assistant Professor</b> <b>Department of IT</b> <b>CBIT</b>	Experiment with OpenAI's GPT models for Text Generation and Classification <b>Dr. Prasun Dutta,</b> <b>Assistant Professor,</b> <b>Department of CSE,</b> <b>SRM University-AP</b>

<b>Day 4</b> <b>22/05/2025</b>	Large Language Models (LLMs), Evaluating LLM Performance  <b>Dr Sreenivasulu Madichetty</b> <b>Manager-Data Science</b> <b>Publicis Sapient, Hyderabad</b>	GenAI Use Cases and Platforms <b>Dr. Lov Kumar</b> <b>Assistant professor</b> <b>Department of Computer</b> <b>Engineering</b> <b>NIT Kurukshetra</b>
<b>Day 5</b> <b>23/05/2025</b>	GenAI for Vision  <b>Dr DLS Reddy,</b> <b>Associate Professor,</b> <b>Department of AIDS, CBIT</b>	Case Study: Generative AI for Personalized Learning, <b>Dr. M. Krishna Siva Prasad,</b> <b>Assistant Professor,</b> <b>Department of CSE,</b> <b>School of Engineering and</b> <b>Sciences, SRM university, AP.</b>
<b>Day 6</b> <b>26/05/2025</b>	Case Study: Generative AI for Creative Content Generation  <b>Prof.Gunjan Mansingh</b> <b>Professor</b> <b>Department of computing</b> <b>Faculty of Science and</b> <b>Technology</b> <b>The University of the West</b> <b>Indies, Mona campus,Kingston,</b> <b>Jamaica</b>	Generative AI with LLMs, LLMs for Search, Prediction, and Generation  <b>Dr. M. Krishna Siva Prasad,</b> <b>Assistant Professor,</b> <b>Department of CSE,</b> <b>School of Engineering and</b> <b>Sciences, SRM university, AP.</b>
<b>Day 7</b> <b>27/05/2025</b>	Prompt Engineering and Parameter-Efficient Fine-Tuning (PEFT)  <b>Dr. T Sridevi</b> <b>Associate Professor,</b> <b>Department of CSE, CBIT</b>	Case Study: Generative AI for Healthcare <b>(04:00 PM to 05:30 PM)</b> <b>Dr. Sriparna Saha</b> <b>Associate Professor</b> <b>Department of CSE,</b> <b>IIT Patna</b>
<b>Day 8</b> <b>28/05/2025</b>	LangChain for LLM Application Development <b>Sri. Srinivas Mallampati</b> <b>Founder &amp; CEO TechyBees</b> <b>EduCon Private Ltd.</b>	Case Study: LangChain and RAG  <b>Sri. Srinivas Mallampati</b> <b>Founder &amp; CEO TechyBees</b> <b>EduCon Private Ltd.</b>
<b>Day 09</b> <b>29/05/2025</b>	Interacting with Data Using LangChain and RAG  <b>Dr Sreenivasulu Madichetty</b> <b>Manager-Data Science</b> <b>Publicis Sapient, Hyderabad</b>	Building RAG Systems with LangChain  <b>Dr. Lov Kumar</b> <b>Assistant professor</b> <b>Department of Computer</b> <b>Engineering</b> <b>NIT Kurukshetra</b>
<b>Day 10</b> <b>30/05/2025</b>	Generative AI on Cloud, Ethical AI and Responsible AI  <b>Sri. Sateesh Ambesange</b> <b>CEO, PragyanAI, Bangalore</b>	Working with ChatGPT, Capstone Project Evaluation  <b>Sri. Sateesh Ambesange</b> <b>CEO, PragyanAI, Bangalore</b>

### Day 1

**Dt: 19/05/2025(FN & AN)**

**Speaker : Sateesh Kumar Ambesange**

**Topic: Generative AI Fundamentals and Applications**

Mr Sateesh Kumar emphasized the overview of Generative AI, covering its core concepts and diverse applications. He explained the underlying mechanisms, often involving neural networks like Generative Adversarial Networks (GANs) and Transformers. The emphasis was on how these models learn patterns and structures from vast datasets to generate new, realistic outputs. His talk successfully demystified Generative AI, making it understandable for a general audience. It effectively balanced the technical fundamentals with compelling real-world examples, illustrating the transformative potential of this rapidly evolving field.

### Day 2

**Dt: 20-5-2025(FN)**

**Dr. Shirina Samreen**

**Topic: GAN's and VAN's**

The successful completion of the expert session on **Generative Models and Vision Networks**, which focused on key deep learning architectures—**Generative Adversarial Networks (GANs)**, **Variational Autoencoders (VAEs)**, and **Vision Attention Networks (VANs)**. The session was led by [Speaker's Name], who delivered a highly informative and engaging presentation. The speaker provided an **in-depth explanation of the working principles** of GANs and VAEs, offering clarity on their foundational concepts, mechanisms, and use cases.

The discussion covered:

- **Architectures and components** of GANs, including the dynamic between the **generator and discriminator**, which drives adversarial learning.
- **Variational Autoencoders (VAEs)** and how they differ from GANs in terms of latent space modeling and reconstruction.
- **Vision Attention Networks (VANs)**, focusing on how attention mechanisms are leveraged to enhance visual tasks.
- **Real-world applications** of these models in areas such as image generation, data augmentation, medical imaging, and more.

**Day2- 20-5-2025(AN)**

**Dr. Chalavadi Vishnu**

**Topic: Applications of GAN's and VAN's**

The successful completion of the expert session on **Applications of Generative Models and Vision Networks**, which focus on **real-world implications of adversarial attacks** on deep learning models.

Detailed explanation was given on **Vision Attention Networks (VANs)** and their role in **object detection, scene recognition, and fine-grained image classification**, with examples from real-world AI applications. The session also highlighted **adversarial attacks**, where small perturbations to input images can **mislead AI systems**, posing serious risks in areas like **autonomous driving, biometric security, and medical imaging**. Live demonstrations showed how a simple image with imperceptible changes can lead to **completely wrong predictions by AI models**, emphasizing the need for secure and robust AI systems.

### Day 3

**Dt: 21-5-25(FN)**

**Dr B Swathi Sowmya, Dept. of IT, CBIT**

**Topic: Attention Mechanism and Transformer-based Generative Models**

Dr Swathi explained Attention Mechanism and its role in Transformer-based Generative Models, highlighting their fundamental concepts, advantages, recent advancements, and widespread applications.



Her talk began by introducing the Attention Mechanism as a crucial technique in machine learning that allows models to selectively focus on relevant parts of input data. Unlike traditional models that process all input equally, attention assigns varying degrees of importance or "weights" to different elements, enabling more accurate predictions and better understanding of data dependencies. The expert highlighted how attention mechanisms addressed critical limitations of previous deep learning architectures, particularly Recurrent Neural Networks (RNNs) and Convolutional Neural Networks (CNNs).

Emphasized on following:

- **Handling Long-Range Dependencies ,Parallelization Interpretability**
- **Encoder-Decoder Structure,Recent Developments and Future Directions**
- **Applications of Transformer-based Generative Models**

The talk concluded by showcasing the wide-ranging applications of Transformer-based generative models across various domains

**21-5-25(AN)**

**Topic: Experiment with OpenAI's GPT models for Text Generation and Classification Speaker : Dr. Prasun Dutta, Assistant Professor, Department of CSE, SRM University-AP**

Dr. Prasun Dutta Discussed the topic of Various Language models Types of Language models and various applications of Language models. OpenAI's Generative Pre-trained Transformer (GPT) models are advanced AI systems based on transformer architecture. They are widely used for text generation, classification, summarization, translation, and more.

#### **Discussed Key Features**

- Autoregressive Text Generation: Predicts the next word in a sequence, enabling human-like text generation.
- Large-Scale Training: Trained on vast datasets (e.g., GPT-3 has 175B parameters).
- Few-Shot & Zero-Shot Learning: Can perform tasks with minimal or no examples.
- Fine-Tuning: Adaptable for specific tasks like sentiment analysis, spam detection, etc.

#### **Applications**

- Text Generation: Content creation, chatbots, code writing.
- Text Classification: Sentiment analysis, topic labeling, spam detection.
- Summarization & Translation: Condensing long texts or translating languages.

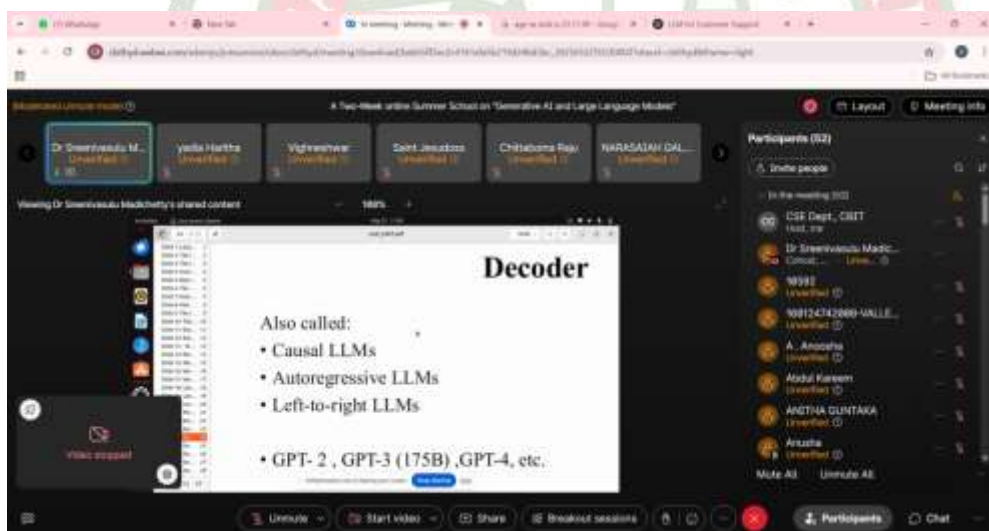
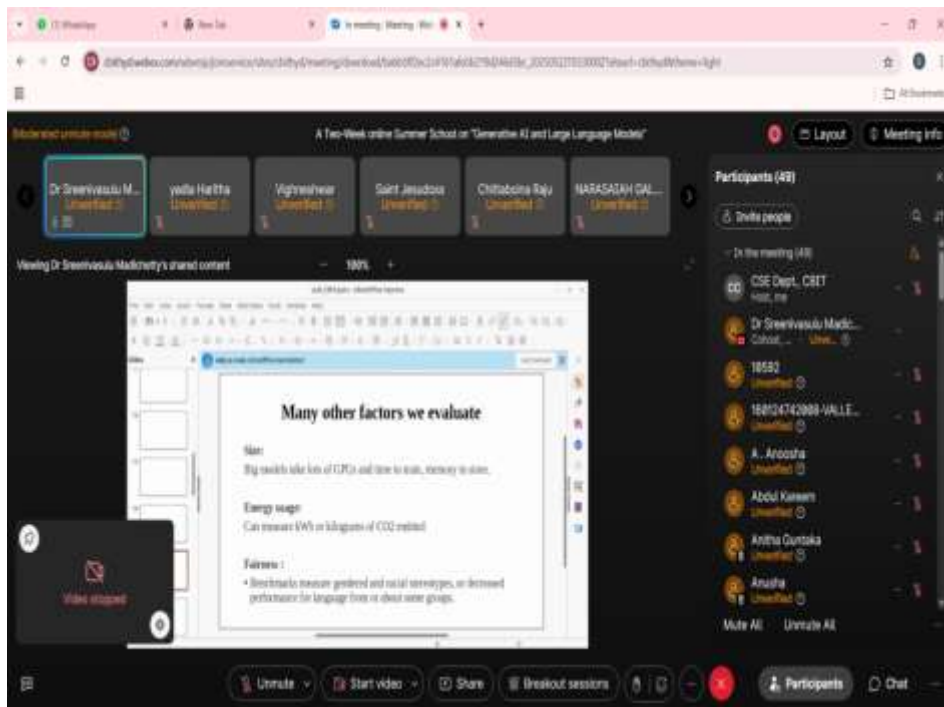
**Day-4**

**Dt: 22-05-25 10.00-11.30**

**Speaker: Dr Sreenivasulu Madichetty,  
"Large Language Models (LLMs), Evaluating LLM Performance"**

#### **Key Points:**

1. Basic Knowledge on Language Modelling Problem
2. Evaluation of model with metrics: Perplexity, size of models, energy usage, fairness
3. Architectures for LLM: decoders, encoders, Encoder-Decoder
4. Applications of LLMs
5. Decoding through sampling
6. Fine tuning the models

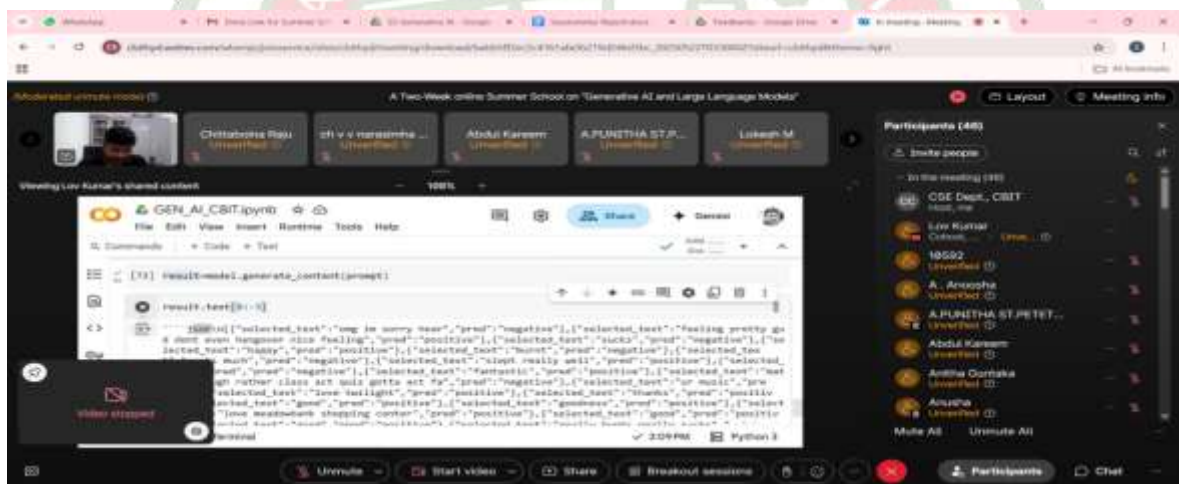


**Date: 22.05.25 2.00pm-3.30pm**

**Speaker: Dr. Lov Kumar**

The Key points fortoday's session are:

1. Motivation behind generative AI
2. BASic machine learning concepts
3. Applications of AI in medical field
4. Evolution of Gen AI
5. Practical session on Gen AI for sentiment analysis
6. Classification Models



**Dr. M. Krishna Siva Prasad, Assistant Professor, Department of CSE, School of Engineering and Sciences, SRM university, AP**

**Language Learning & Writing Assistance:** Tools like Grammarly and ChatGPT support language learners with grammar corrections, vocabulary suggestions, and conversational practice.

## Key Models & Techniques: Discussed Case Studies on Medical Health Applications

- Two networks (Generator & Discriminator) compete to create realistic images.
- Example: StyleGAN for high-quality face generation.



## 2. Diffusion Models

- Gradually denoise random pixels to generate images.
- Example: Stable Diffusion, DALL-E for text-to-image generation.

## 3. VAEs (Variational Autoencoders)

- Encode images into latent space and decode to generate variations.

## 4. Neural Radiance Fields (NeRF)

- Generates 3D scenes from 2D images using volumetric rendering.

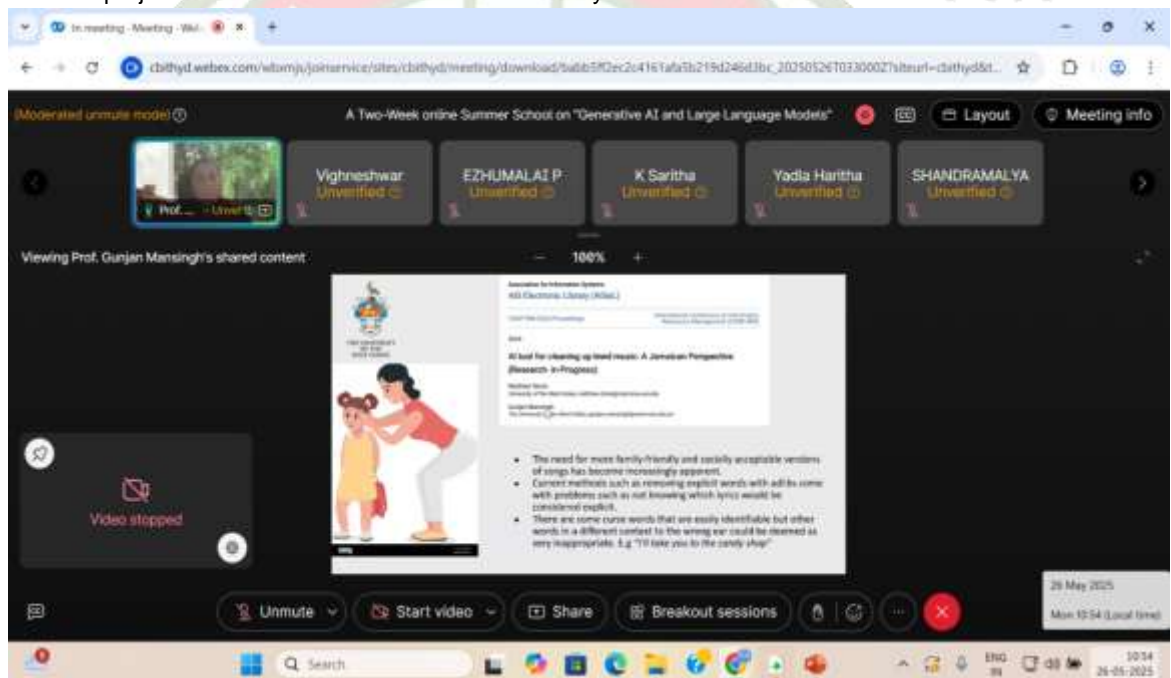
Day 6:

Dt: 26-5-25(FN)

Case Study: Generative AI for Creative Content Generation

Speaker: Prof. Gunjan Mansingh, Professor, Department of computing  
The University of the West Indies, Mona campus, Kingston, Jamaica

- Her talk started with history and evolution of AI and Chatbots, and went on deep dive into the current aspects of Gen AI. Later she emphasized on how AI generated music of different genres and also discussed few challenges in AI related research. She even discussed and explored the projects she had involved in and those done by her students too.



- she even shared few insights and left some resources to explore more on AI-generated research papers like <https://cspages.ucalgary.ca/~smcosta/RSM/1--Sargassum-101.pdf>

Day 6 AN

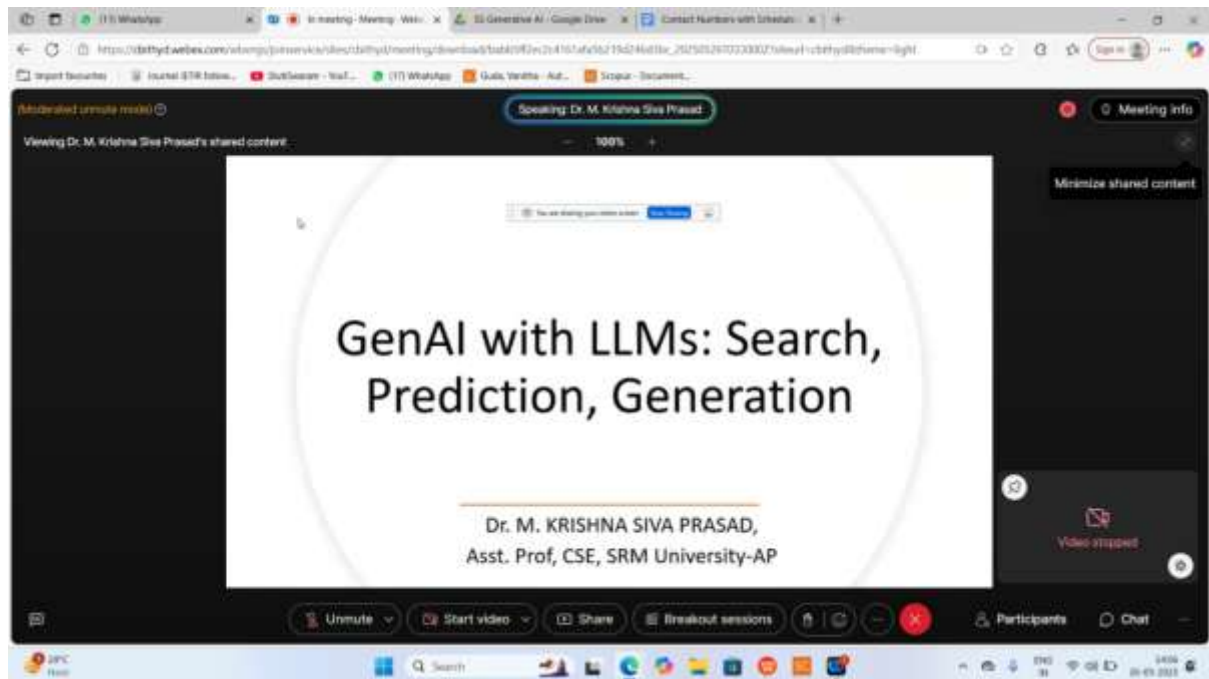
Topic : Generative AI with LLMs, LLMs for Search, Prediction, and Generation Speaker : Dr. M. Krishna Siva Prasad, Assistant Professor, Department of CSE, School of Engineering and Sciences, SRM university, AP.

Discussed about the Key Advancements:

- Semantic Understanding: LLMs interpret user intent (e.g., Google's BERT for contextual search queries).
- Personalized Results: Tailor responses based on user history (e.g., ChatGPT-powered Bing Chat).
- Conversational Search: Enable natural language interactions (e.g., customer support chatbots).

LLM Application Areas:

- Enterprise knowledge management (e.g., retrieving internal documents).
- Academic research (e.g., semantic search in scholarly databases).



## Day-7

Date: 27-5-2025

Time: 10:00AM to 11:30AM

Topic: Prompt Engineering and Parameter-Efficient Fine-Tuning (PEFT)

Speaker: Dr. T. Sridevi, Associate Professor, CSE, CBIT, Hyderabad.

The session began with a warm welcome and a brief overview of the growing importance of Large Language Models (LLMs) in the field of Natural Language Processing (NLP). The speaker highlighted how LLMs like GPT, BERT, and T5 are transforming tasks such as translation, summarization, question answering, and more.

However, handling large datasets and training these models from scratch or even fine-tuning them fully is computationally expensive. This led to the introduction of the concept of Parameter-Efficient Fine-Tuning (PEFT). The speaker explained that while pre-trained models offer general language capabilities, fine-tuning helps adapt them to domain-specific tasks or datasets. Fine-tuning.

Scaling and Challenges of Fine-Tuning. The key challenges covered included:

Computational cost: Full model fine-tuning involves updating billions of parameters.

Storage overhead: Need to store a separate copy of weights for each task/domain.

Overfitting risk on small datasets. Latency and efficiency issues in real-world deployment.

## Overview of PEFT Techniques

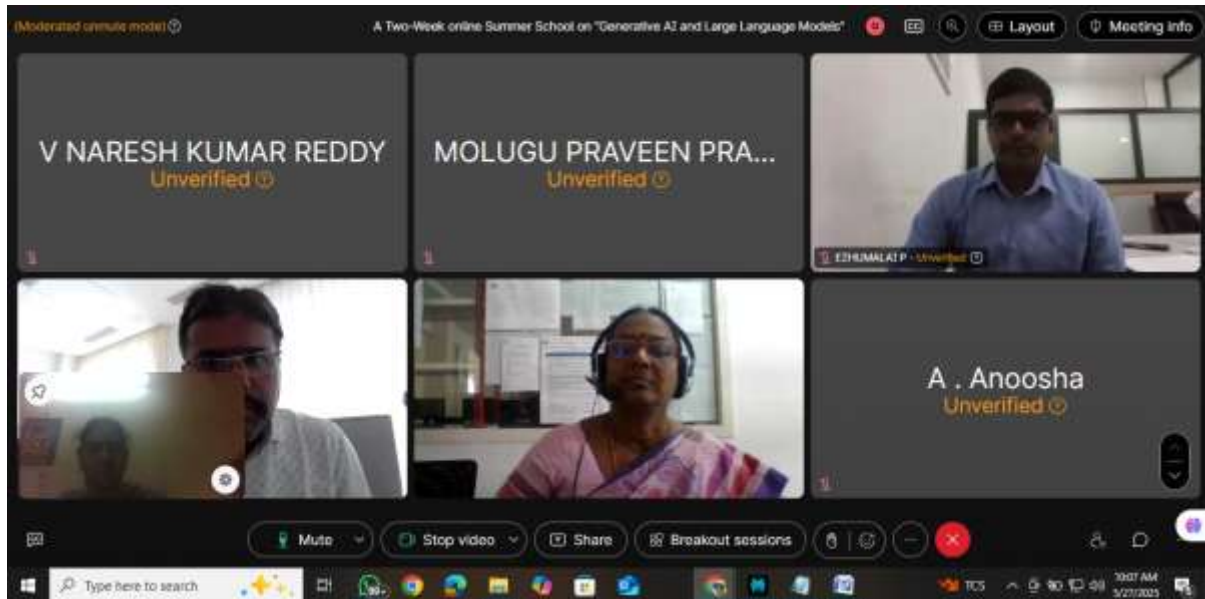
PEFT aims to fine-tune only a small subset of parameters in the model while keeping most of the pre-trained weights frozen. Some discussed techniques included: Adapter tuning, Prefix tuning, Prompt tuning. LoRA (Low-Rank Adaptation) – which was the main focus

These methods significantly reduce the number of trainable parameters and speed up training.

**Hands-on Demonstration :** A highly engaging hands-on session followed, where the speaker walked participants through: Setting up a Google Colab environment, Installing necessary libraries (transformers, peft, etc.), Loading a pre-trained LLM, Applying LoRA for task-specific fine-tuning. This practical demonstration helped participants gain confidence in using PEFT tools.

## Conclusion:

The session was highly informative, interactive, and practical. Participants gained a clear understanding of how to deal with large datasets using LLMs and how to apply efficient fine-tuning techniques like LoRA. The hands-on demo using Google Colab made it especially impactful.



## Day-7

Date: 27-05-2025

Time: 4:00PM to 5:30PM

Topic: Case Study: Generative AI for Healthcare

Speaker: Dr. Sriparna, Associate Professor, CSE, IIT, Patna, India.

Discussed about LLM's Overview. Generative AI in Healthcare: Key Points and Case studies of IIT Patna with Results the highlighted points are :

**Accelerated Drug Discovery** :Generative AI can rapidly simulate and generate novel molecular structures, identifying potential drug candidates. This reduces development time and costs compared to traditional methods.

**Personalized Treatment Plans**:By analyzing patient-specific data (genetics, lifestyle, medical history), AI can tailor therapies, optimizing outcomes for conditions like cancer or chronic diseases.

- **Automated Clinical Documentation**:Transcribes patient-doctor interactions in real-time, auto-generates reports, and reduces administrative burdens, allowing clinicians to focus on care.
- **Virtual Health Assistants**:AI-powered chatbots provide 24/7 patient support, medication reminders, mental health check-ins, and triage, improving accessibility and adherence.
- **Research & Knowledge Synthesis**:Summarizes vast medical literature, generates hypotheses, and drafts research papers, accelerating innovation and evidence-based decision-making.
- **Medical Training Simulations**:Creates virtual patient scenarios and surgical simulations for risk-free training, enhancing skills for rare or complex cases.
- **Challenges & Future Directions**  
Ensuring model accuracy, regulatory compliance (e.g., FDA approvals), and explainability to build trust among practitioners and patients.





## Day 8

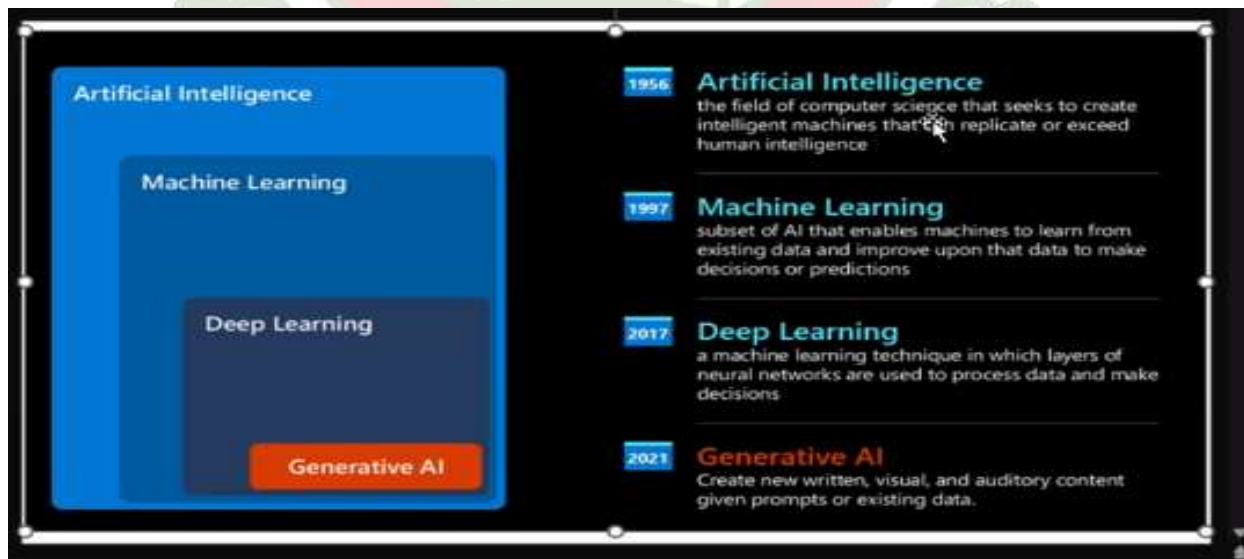
**Date & Time:** 28-05-2025 (10:00 AM – 11:30 AM)

**Session Title:** LangChain for LLM Application Development

**Speaker:** Sri. Srinivas Mallampati

- Sri. Srinivas Mallampati delivered an engaging session on using LangChain to build applications with Large Language Models (LLMs). He explained how LLMs fit into the broader world of AI, starting from Artificial Intelligence to Machine Learning, Deep Learning, and Generative AI. The session helped participants understand how LLMs like GPT-4 and ChatGPT are trained to handle tasks like translation, summarization, and conversations.
- He then introduced LangChain, a tool that makes it easier to work with these models. Key components such as langchain-core, LangGraph, LangServe, and LangSmith were explained in simple terms. The session included a hands-on demo showing how to connect to the OpenAI API, manage prompts, and build smart workflows.

## ScreenShots Of Session:



The screenshot shows a Jupyter Notebook interface. At the top, there's a table of contents with the following items:

- Direct API calls to OpenAI
- API calls through LangChain:
  - Prompts
  - Models
  - Output parsers

Below the table of contents, there's a code cell with the following Python code:

```
#!pip install python-dotenv
#!pip install openai

import os
import openai

from dotenv import load_dotenv, find_dotenv
_ = load_dotenv(find_dotenv()) # read local .env file
openai.api_key = os.environ["OPENAI_API_KEY"]
```

At the bottom of the notebook, there's a section titled "Chat API : OpenAI".

**Date & Time:** 28-05-2025 (02:00 PM – 03:30 AM)  
**Session Title:** Case Study - LangChain and RAG  
**Speaker:** Sri. Srinivas Mallampati

In this case study session, Sri. Srinivas Mallampati explored the practical implementation of LangChain in combination with Retrieval-Augmented Generation (RAG) for real-world applications. He explained how RAG enhances the capabilities of LLMs by enabling access to domain-specific and up-to-date data through retrieval mechanisms. The session highlighted the process of converting unstructured content into vector embeddings, storing them using vector databases, and retrieving relevant results using similarity search techniques. Through a step-by-step demonstration, attendees were shown how to integrate a retriever into LangChain, configure the RAG pipeline, and deploy a knowledge-driven chatbot. The session offered a comprehensive look into building scalable, intelligent applications that go beyond the limitations of static language models.

## Day 9

**Dt:** 29-05-2025 (10:00 AM – 11:30 AM)

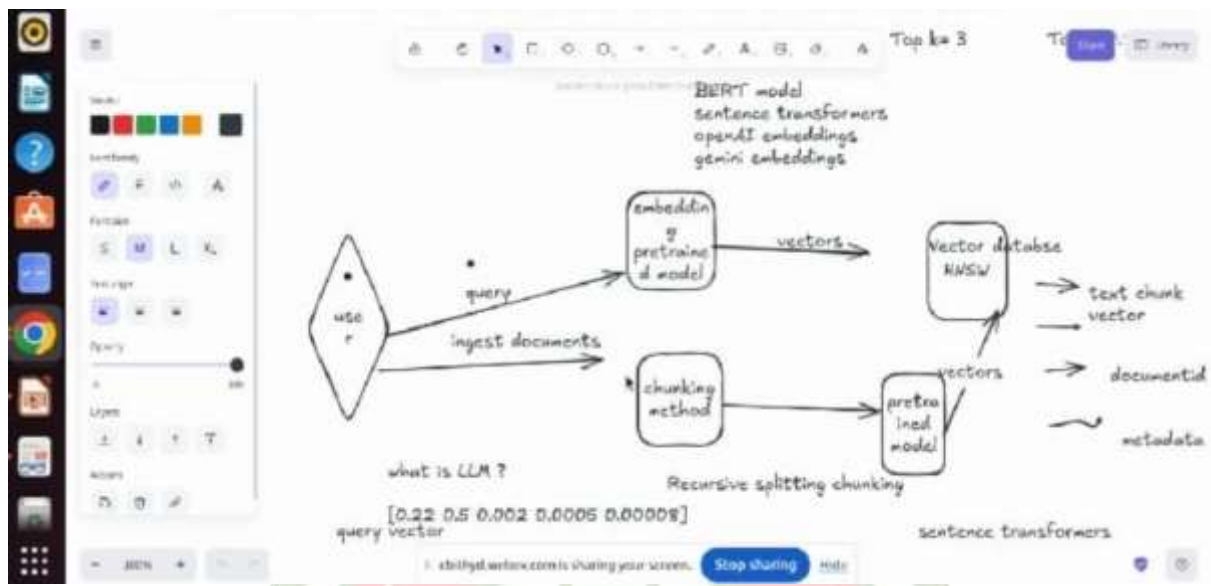
**Session Title:** Interacting with Data Using LangChain and RAG

**Speaker:** Dr. Sreenivasulu Madichetty

Dr. Sreenivasulu Madichetty delivered a clear and practical session on interacting with data using LangChain and Retrieval-Augmented Generation (RAG). He explained how vector databases serve as the backbone of AI-powered search and retrieval by storing vector embeddings that represent the semantic meaning of text, phrases, and documents. These databases are especially crucial for managing unstructured data—such as text, audio, and images—which account for over 80% of today's information.

The session covered the working of vector search, which involves converting queries and content into embeddings, storing them in the database, and retrieving the most relevant results using techniques like Approximate Nearest Neighbors (ANN) and cosine similarity. He also highlighted the importance of RAG in addressing the limitations of tools like ChatGPT, which are restricted to pre-existing data and cannot access real-time or domain-specific information.

The session concluded with a hands-on demonstration involving Gemini, LangChain, and ChromaDB. Participants were guided through the process of obtaining an API key, ingesting content from a Gemini blog, initializing the Gemini model, storing embeddings in Chroma, and setting up a retriever to enable effective data interaction.



**Date & Time: 29-05-2025 (2:00 PM – 3:30 PM)**

**Session Title: Building RAG Systems with LangChain**

**Speaker: Dr. Lov Kumar**

Dr. Lov Kumar conducted an insightful session focused on building Retrieval-Augmented Generation (RAG) systems using LangChain. He began with an overview of the evolution of AI, then introduced key concepts such as LangChain, RAG, and the role of embeddings in enabling semantic search.

The session detailed the end-to-end RAG process—from breaking raw data into chunks, generating OpenAI embeddings, storing them in vector databases like FAISS, to retrieving information using a retriever module. Dr. Kumar highlighted how this approach improves over traditional keyword-based methods by capturing deeper contextual relevance through embeddings.

Participants also explored real-world applications, including zero-shot classification, sentiment analysis, and model interpretability using tools like SHAP explainer. A live demo showcased the use of LangChain's character text splitter for preprocessing, helping attendees understand the practical aspects of building a RAG workflow from scratch.

- Document Loaders: Fetch data from PDFs, websites, DBs (Unstructured, PyPDF).
- Text Splitters: Chunk data for embeddings (RecursiveCharacterTextSplitter).
- Embeddings: Convert text to vectors (OpenAIEmbeddings, HuggingFaceEmbeddings).
- Vector Stores: Store/retrieve embeddings (FAISS, Pinecone, Chroma).
- Retrievers: Fetch contextually relevant chunks.
- LLMs: Generate answers using retrieved context.

**Day10**

**Dt : 30-05-25 (FN & AN Session)**

**Topic : Generative AI on Cloud, Ethical AI and Responsible AI Working with ChatGPT, Capstone Project Evaluation**

**Speaker: Sri. Sateesh AmbesangeCEO, PragyanAI, Bangalore**



Artificial Intelligence (AI): AI refers to machines designed to perform tasks that typically require human intelligence, such as reasoning, learning, decision-making, and natural language processing. Key branches include: Machine Learning (ML): Algorithms learn patterns from data (e.g., supervised, unsupervised learning). Deep Learning (DL): Neural networks for complex tasks (e.g., image recognition, NLP).

**Generative AI: Creates content (text, images) using models like GPT-4, DALL-E.**

Responsible AI : Responsible AI ensures ethical, fair, and transparent AI development and deployment. Key principles: Fairness: Mitigate biases in data/models (e.g., gender, racial bias in hiring algorithms). Transparency: Explainable AI (XAI) to clarify decision-making (e.g., LIME, SHAP). Privacy: Protect user data (e.g., GDPR compliance, federated learning). Accountability: Assign responsibility for AI outcomes (e.g., audit trails). Safety & Robustness: Prevent misuse and ensure reliability (e.g., adversarial testing).

**Challenges in Responsible AI :** Bias: Historical data may perpetuate discrimination. Black-Box Models: Complex models (e.g., deep learning) lack interpretability. Regulatory Gaps: Evolving laws struggle to keep pace with AI advancements. Frameworks & Tools: Google's PAIR (People + AI Research): Guidelines for human-centric AI. Microsoft's Responsible AI Toolkit: Tools for fairness, interpretability. IBM's AI Fairness 360: Open-source bias detection toolkit.

**Applications of Responsible AI:** Healthcare: Bias-free diagnostic tools. Finance: Transparent credit scoring. Autonomous Vehicles: Ethical decision-making in accidents.

- A Walk Through AWS, Google cloud, Microsoft Azure Frameworks) which included comparison study of model catalogs, code completion, vector db, model deployment, and smart applications.
- The challenges in ensuring ethical and responsible use of Gen AI

## Conclusion

This workshop offered a holistic view of Generative AI, equipping participants with both theoretical knowledge and practical tools for research and application in diverse fields such as healthcare, education, and content creation. The workshop successfully conducted with total participation of 151 participants in the course.

## Faculty Coordinators :

### Coordinators:

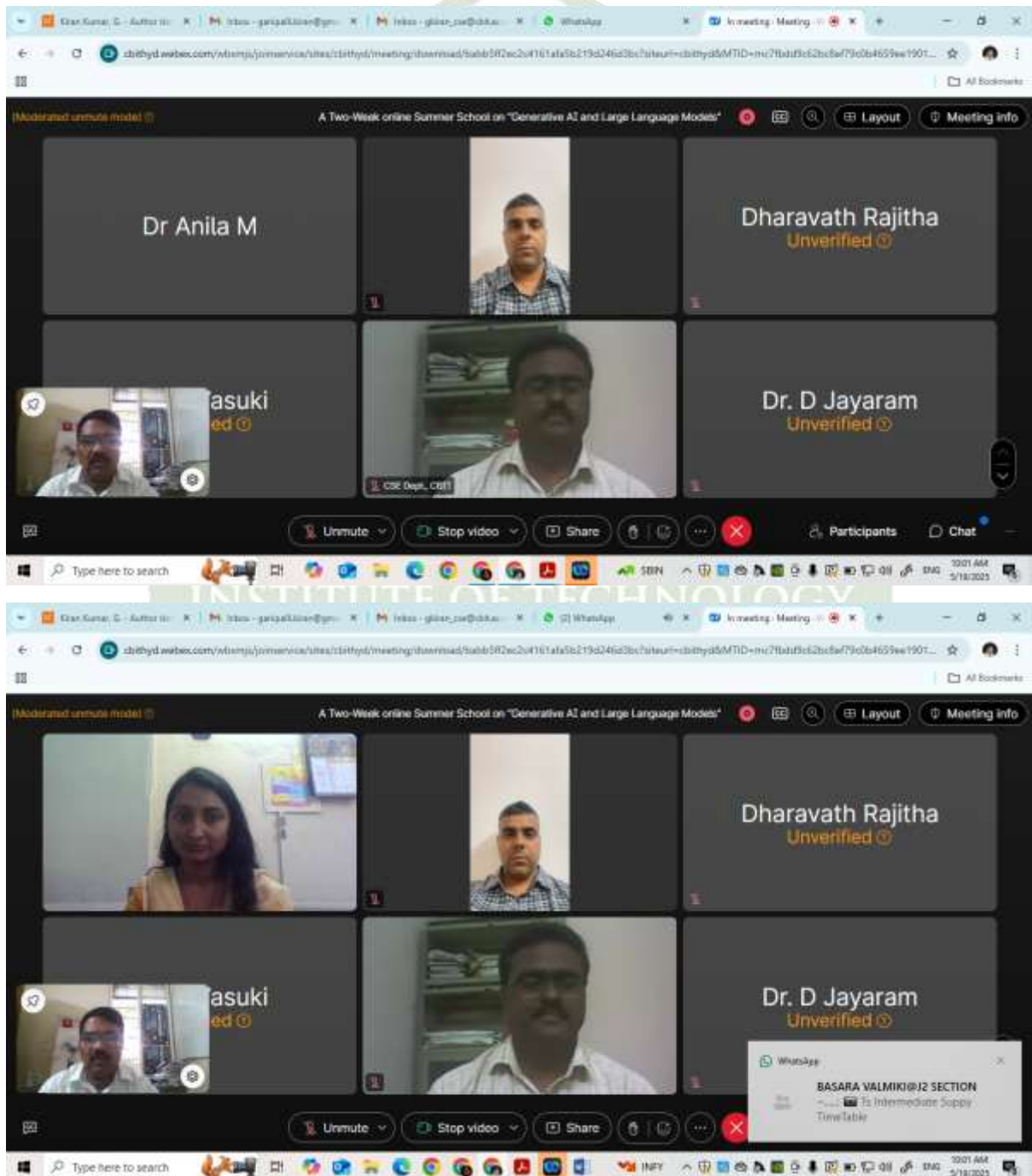
1. Prof. S China Ramu, Professor, Department of CSE, CBIT
2. Dr. Kolla Morarjee, Associate Professor, Department of CSE, CBIT
3. Dr. G Kiran Kumar, Associate Professor, Department of CSE, CBIT

### Co-Coordinators:

1. Dr. G Vanitha, Associate Professor, Department of CSE, CBIT
2. Smt. S Durga Devi, Assistant Professor, Department of CSE, CBIT
3. Smt. Isha Padhy, Assistant Professor, Department of CSE, CBIT
4. Dr. M Anila, Assistant Professor, Department of CSE, CBIT

Photographs :

19/05/2025 @ 9.30 Inaugural



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Meeting Title: A Two-Week online Summer School on "Generative AI and Large Language Models"

Participants:

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- Dr. T. Satyanarayana M...
- asagar ed
- Narasaiah Unverified

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Meeting Title: A Two-Week online Summer School on "Generative AI and Large Language Models"

Participants:

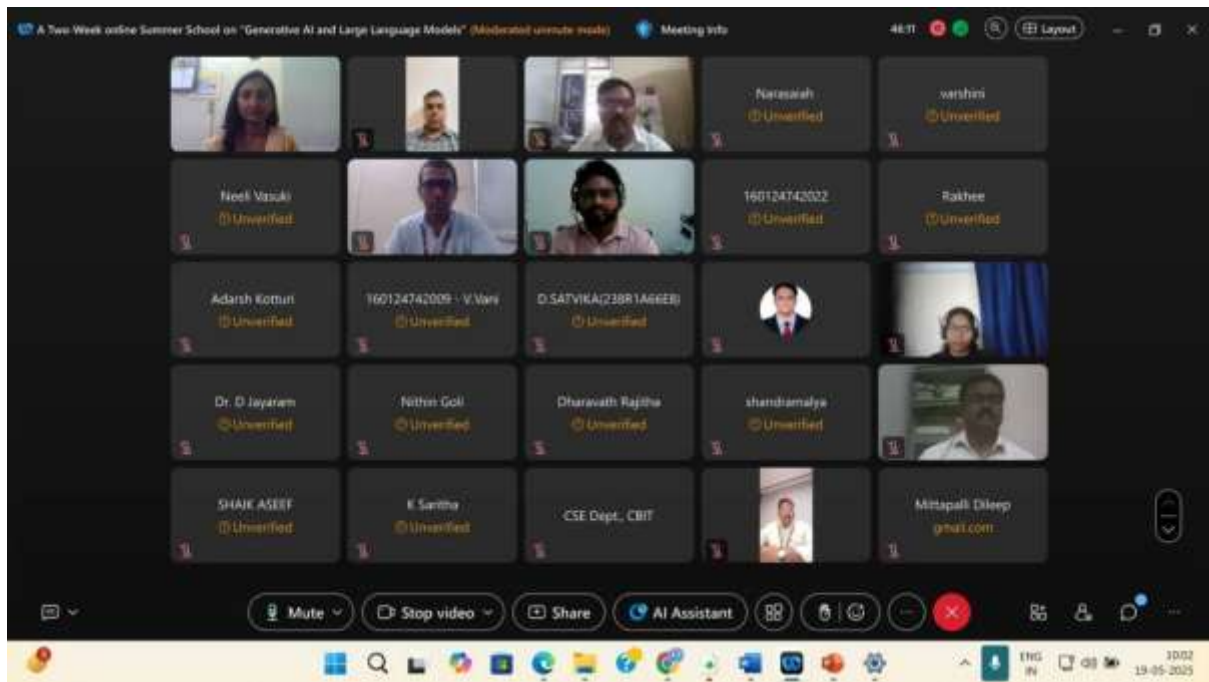
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- Mittapalli Dileep

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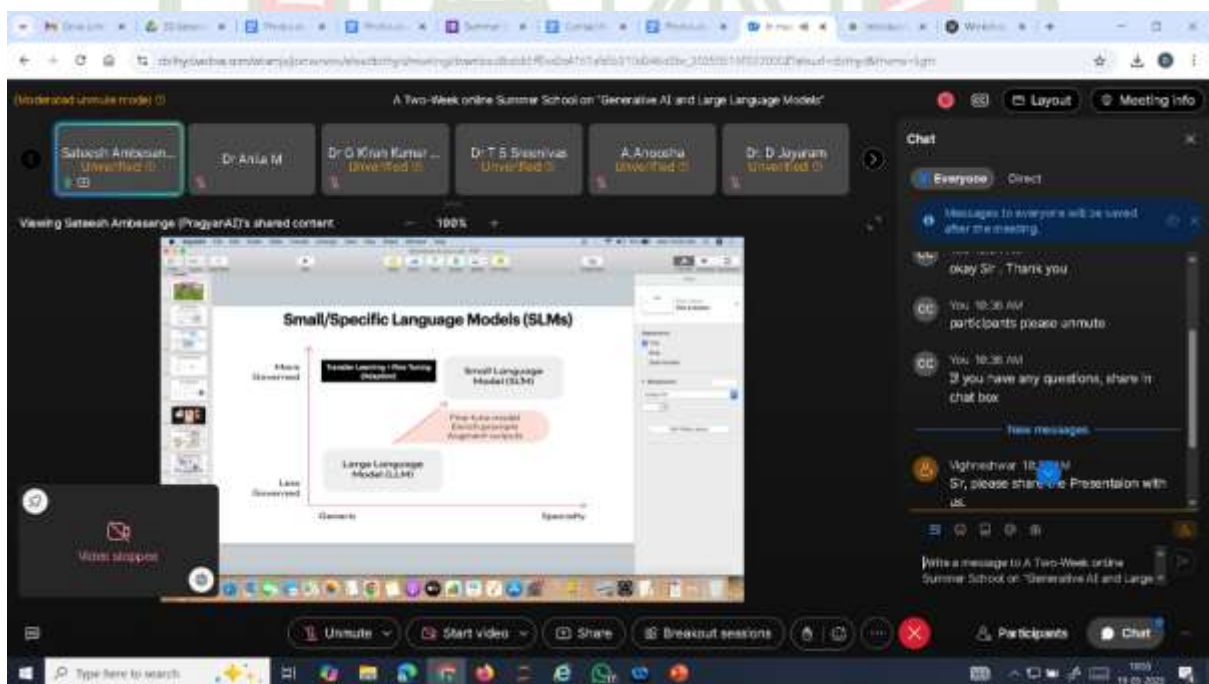
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19/05/2025(FN)




19-5-25(AN Session)

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Dr Anila M. cbit.ac.in Dr. D. Jayaram Unverified Nitish Gok Unverified Sateesh Ambesange Unverified

Viewing Sateesh Ambesange (PragyanAI)'s shared content 100%



Unmute Start video Share AI Assistant

Participants (46)

Invite and remind

Participants (46)

- DM Dr Anila M. cbit.ac.in
- CC CSE Dept., CBIT Host
- Sateesh Ambesange (PragyanAI) Presenter
- 01-Reddygan Drithi Unverified
- 160124742008-VALLEPU SU... Unverified
- A.Anoosha Unverified
- A.PUNITHA ST.PETETS ENGL... Unverified
- ANITHA GUNTAKA Unverified

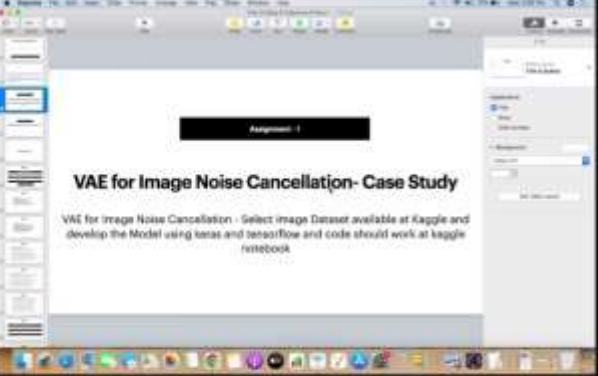
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Dr Anila M. cbit.ac.in Dr. M Venu Gopalachari Unverified Prof. M Saurav Das Unverified Sateesh Ambesange Unverified

Viewing Sateesh Ambesange (PragyanAI)'s shared content 100%



Unmute Start video Share AI Assistant

Chat

Everyone

Dr. S. Srinivas 15:06  
No questions sir

SHANORAMALYA 15:06  
SIR WILL YOU BE SHARING US THE  
FORMAT FOR THE REPORT ??

Ethumalai P., ST 15:06  
It clear mam

SUBILATHA T. 15:07  
clear sir

Write a message to everyone

Search

A Two-Week online Se... (Moderated unmuting mode) Meeting Info 05:53:31 Layout

Dr Anila M cbit.ac.in Dr M Venu Gopalachari Prof. M Swamy Das Sateesh Ambesange L Unverified

Viewing Sateesh Ambesange (PragyanAI)'s shared content 100%

Response: 1

**RAG Model using Groq For IPC Document- Case Study**

Chat

Everyone Direct:

Dr T S Sreenivas Unverified 15:06  
No questions sir

SHANDRAMALWA Unverified 15:06  
SIR WILL YOU BE SHARING US THE  
FORMAT FOR THE REPORT ??

Ethumala P. SIT Unverified 15:06  
It clear mam

SUBLATHA T Unverified 15:07  
clear sir

Write a message to everyone

Unmute Start video Share AI Assistant

Search

ENG-IN 15:10 19-05-2025

A Two-Week online Se... (Moderated unmuting mode) Meeting Info 05:57:34 Layout

Dr Anila M cbit.ac.in Dr M Venu Gopalachari Prof. M Swamy Das Sateesh Ambesange L Unverified

Viewing Sateesh Ambesange (PragyanAI)'s shared content 100%

**GAN as Image Super Resolution - Case Study**

GAN as Image Super Resolution - for retinal image select the dataset input image, output High resolution image.

For that use same image dataset. First reduce the size of image with slightly blurring them, and use original images as super resolution image. Write code in keras for kaggle notebook

Participants (77)

Invite and remind

Participants (77)

DM Dr Anila M  
Cohost, me cbit.ac.in

CC CSE Dept., CBIT  
Host

Sateesh Ambesange (Pragya...  
Presenter + Unverified

A.Anoosha  
Unverified

01-Reddygari Drithi  
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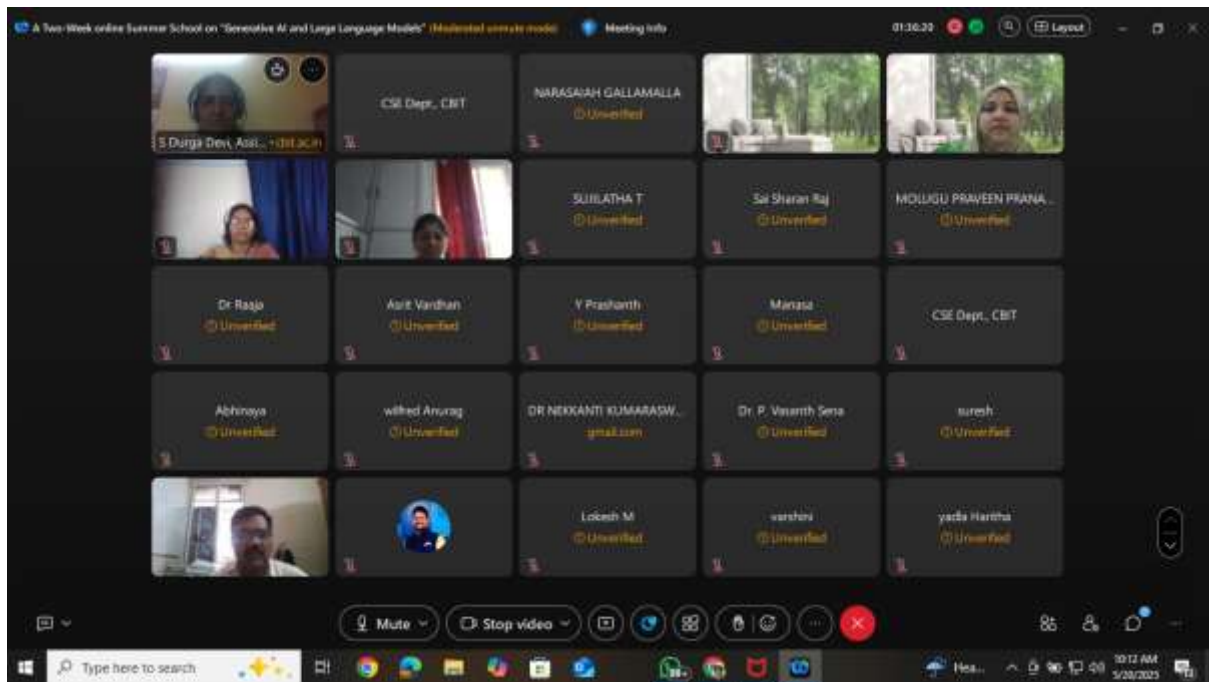
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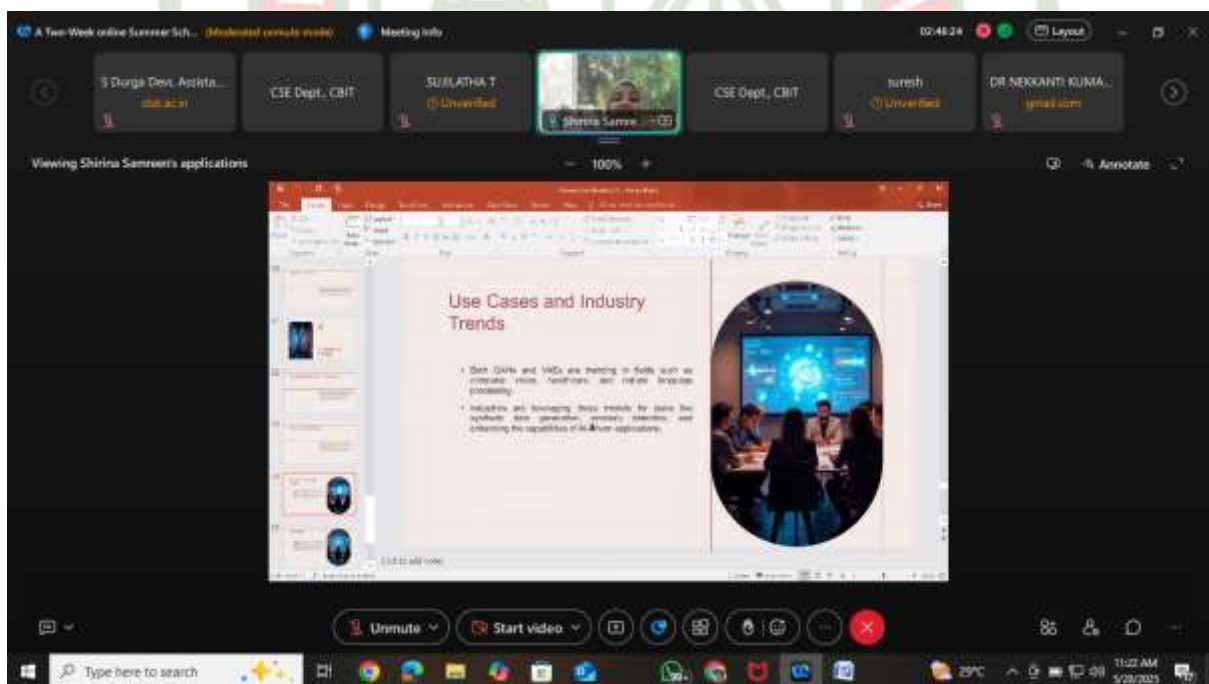
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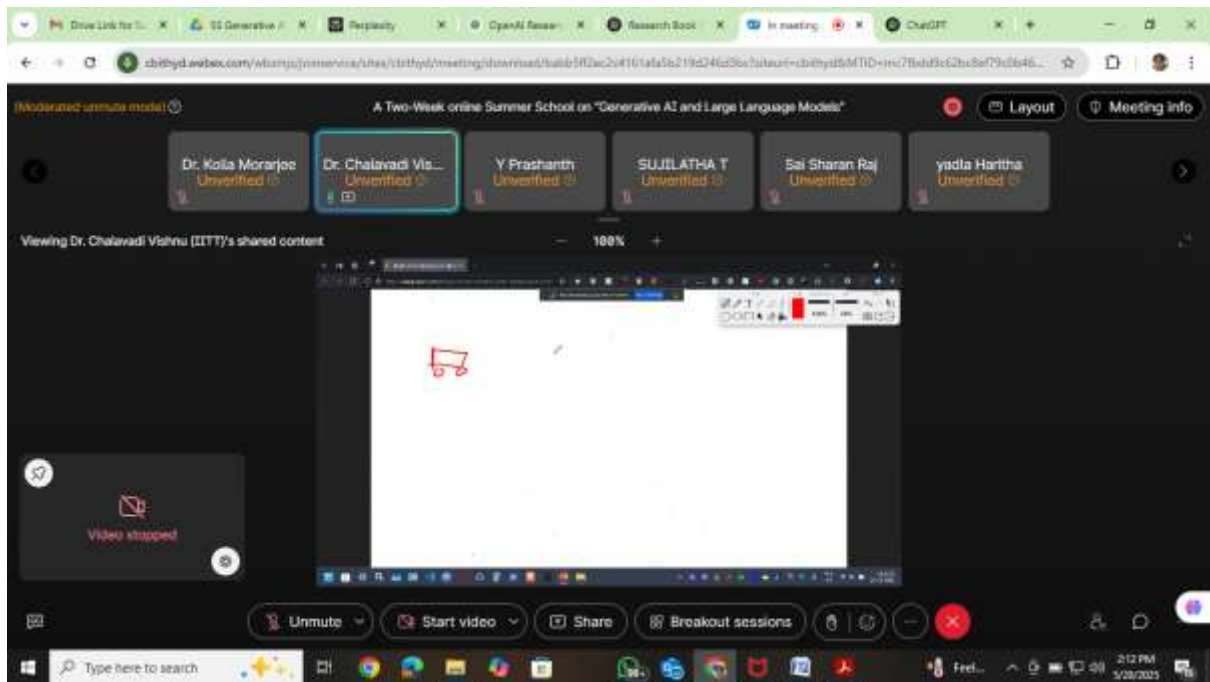




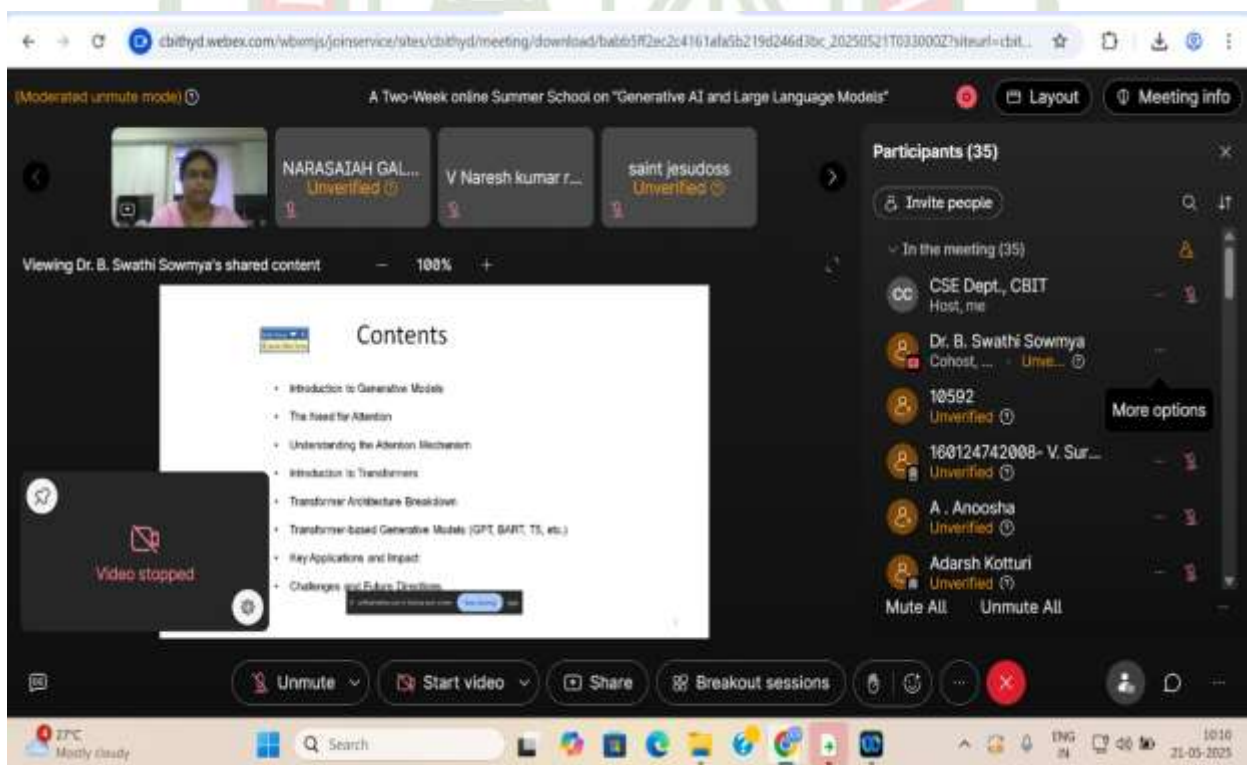
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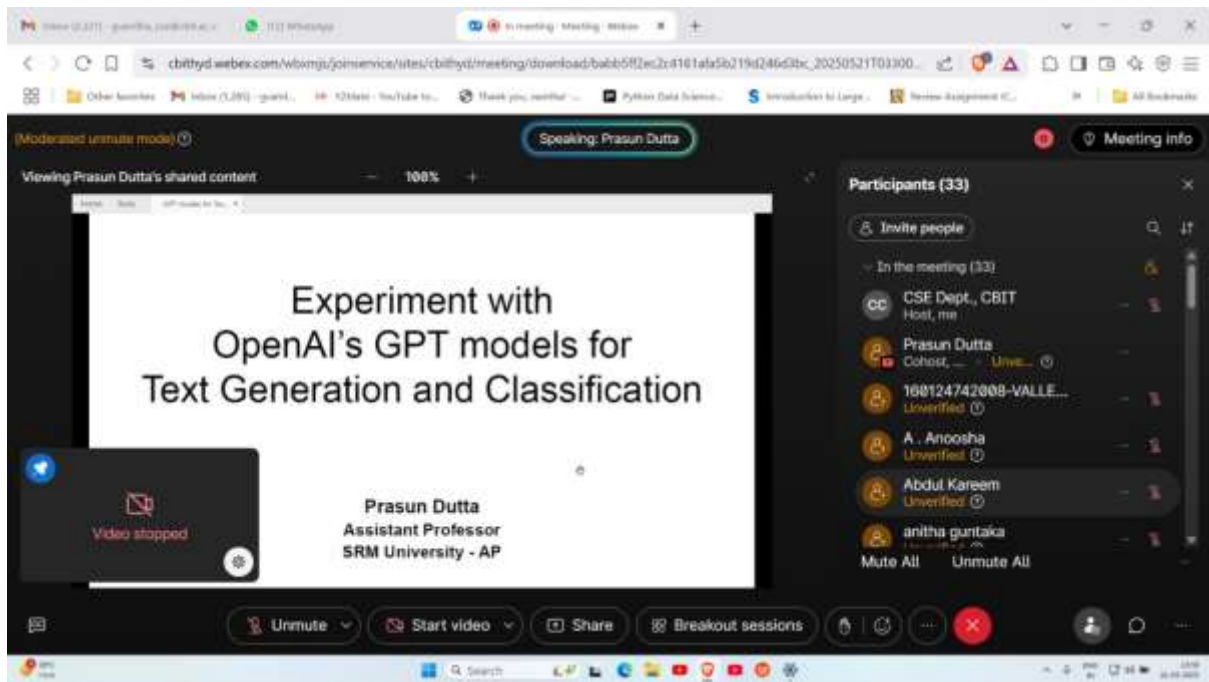
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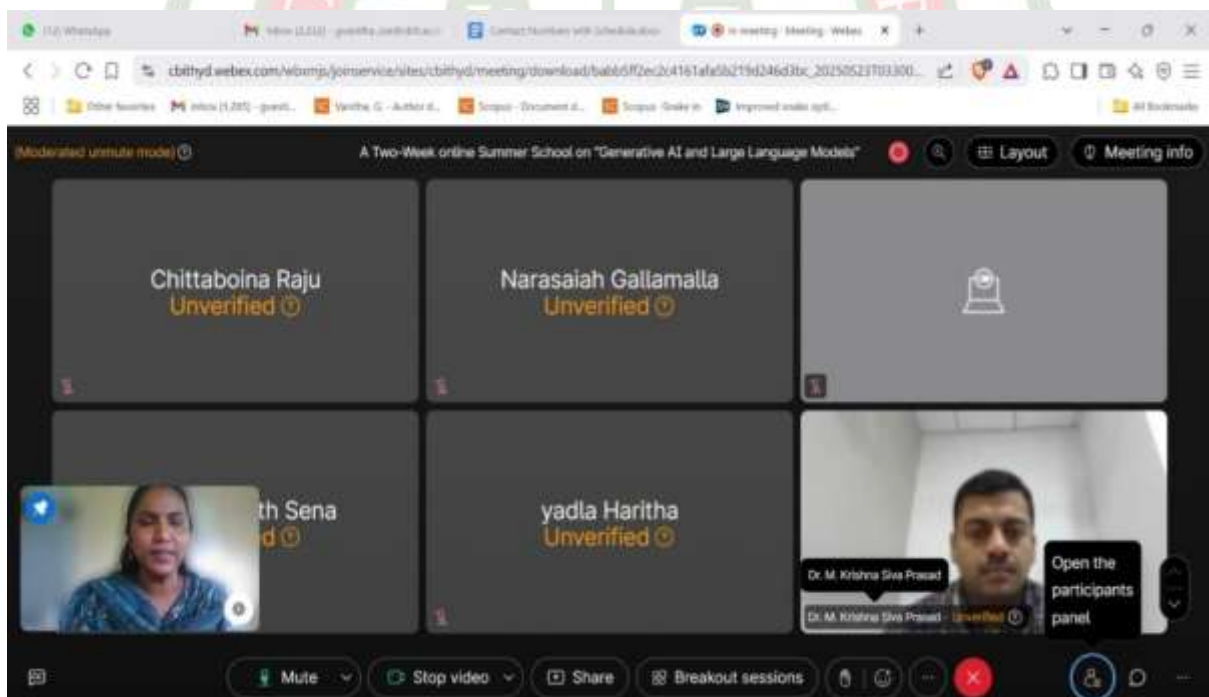
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21.05.2025 AN



23.05.2025 (FN)



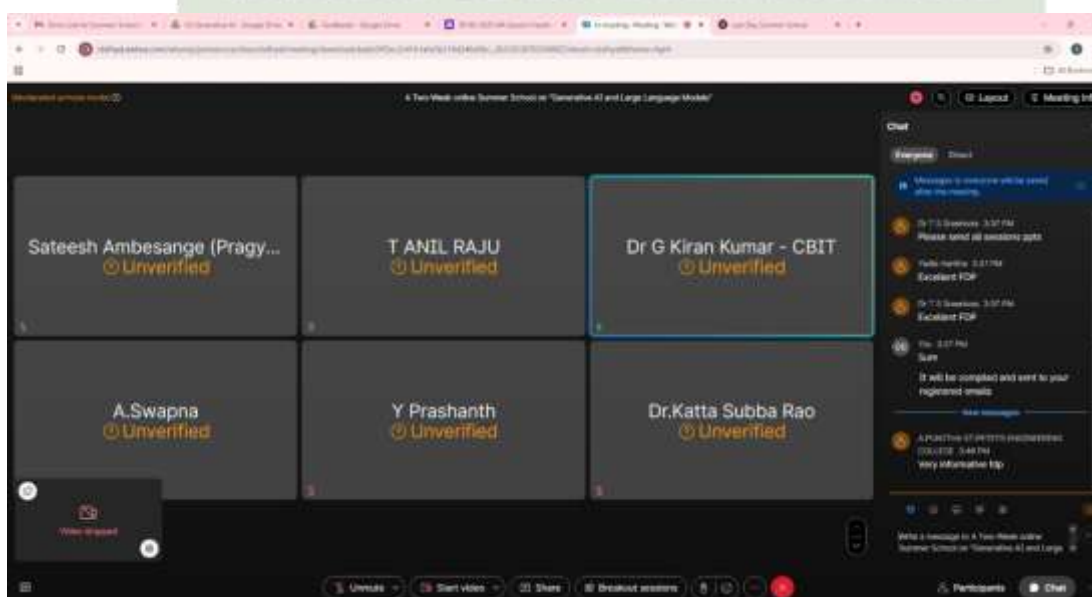
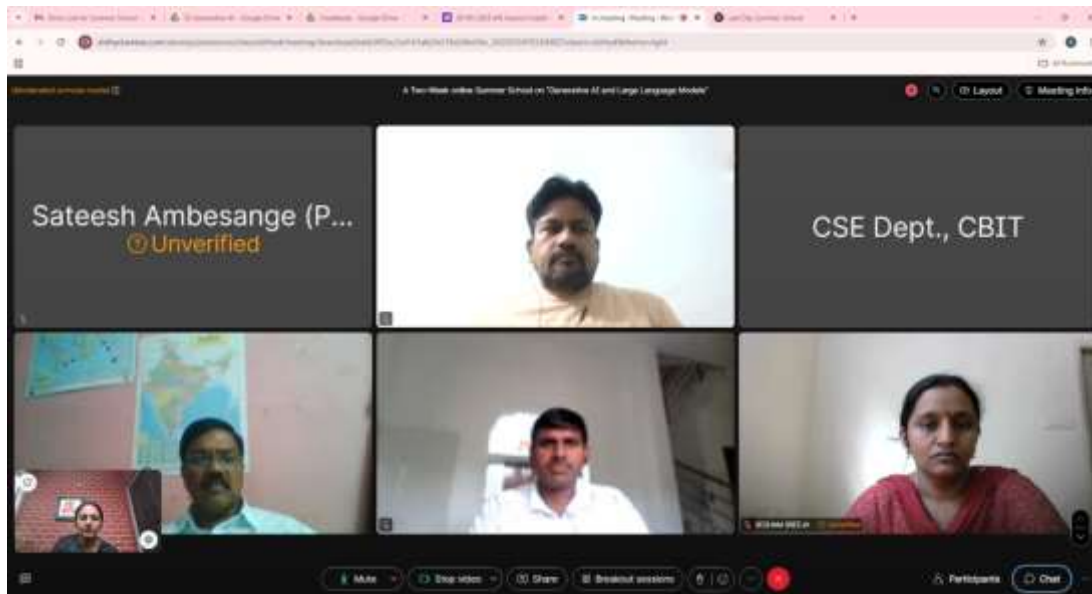


30-05-25 FN

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## Valedictory 30-05-2025





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INSTITUTE OF TECHNOLOGY**  
An Autonomous Institute | Affiliated to Osmania University  
Kokapet Village, Gandipet Mandal, Hyderabad, Telangana 500075, www.cbil.ac.in

COMMITTED TO  
RESEARCH,  
INNOVATION AND  
EDUCATION

**46**  
years

## Department of Computer Science and Engineering

Date: 31-05-2025

**Report  
on**  
One week online workshop on  
“Learning Methods in Artificial Intelligence”  
12<sup>th</sup> April, 2025 – 17<sup>th</sup> May, 2025 (on Every Saturday)  
**Organized by**  
**Department of Computer Science and Engineering**  
**In Association with**  
**ACM Hyderabad Deccan Professional Chapter**

A brief report of the online workshop on “Learning Methods in Artificial Intelligence”, organized in online mode from April 12th to May 17th, 2025 by the Department of Computer Science and Engineering.

This online workshop is open to all the UG and PG Students, researchers, and faculty. The number of participants who registered was 83. A brief introduction of the Resource Person introduced for each session by coordinators of the FDP. Feedback was collected from the participants at the end of the online workshop Sri. P. Ramesh Babu.

### Objective of the Workshop

The aim of this workshop is to provide comprehensive exposure to a wide spectrum of Learning Methods in Artificial Intelligence (AI), ranging from foundational techniques to advanced paradigms. The sessions are structured to blend theoretical foundations with practical applications through hands-on sessions, enabling participants to gain real-world insights.

### Workshop Summary

#### Day 1: April 12, 2025

##### Session 1: 9:15 AM – 11:15 AM

Topics: Supervised Learning, Unsupervised Learning

Speaker/Instructor: Dr. R Ravinder Reddy, Professor, Dept. of CSE, CBIT

Speaker delivered lecture on **Supervised Learning**

- In **Supervised Learning**, we train the model using **labeled data**.
- That means each training input comes with a known output or target.
- The goal is to learn a mapping from input to output so that the model can predict the output for new, unseen data.
- **Common algorithms** include Linear Regression, Logistic Regression, Decision Trees, and Neural Networks.



- Think of it like teaching a child with flashcards — you show the image and say the word, helping them learn to associate the two.

He spoke about **Unsupervised Learning**

- In contrast, **Unsupervised Learning** deals with **unlabeled data**.
- The system tries to find hidden patterns, structures, or groupings within the data.
- There's no correct answer provided — the algorithm learns to organize the data by itself.
- **Key techniques** include Clustering (like K-Means) and Dimensionality Reduction (like PCA).

#### Session 2: 11:30 AM – 1:30 PM

Topics: Bayesian Learning, Hebbian Learning, Transfer Learning

Speaker/Instructor: Dr. Kadiyala Ramana, Associate Professor, Dept. of AIDS, CBIT

Speaker delivered lecture on Introduction to Advanced Learning Techniques

- After covering supervised and unsupervised learning, we now move into three specialized methods that offer deeper insight into how machines and even biological systems learn:
  - **Bayesian Learning** – rooted in probability theory
  - **Hebbian Learning** – inspired by neuroscience
  - **Transfer Learning** – essential for efficiency in modern AI systems

#### Session 3: 2:30 PM – 4:30 PM

Topics: Hands-on: Supervised, Unsupervised, Bayesian, Hebbian Learning

Speaker/Instructor: Sri. Sateesh Ambesange, CEO, PragyanAI, Bangalore

#### Day 2: April 19, 2025

#### Session 1: 9:15 AM – 11:15 AM

Topics: Semi-Supervised, Self-Supervised, Ensemble Learning

Speaker/Instructor: Prof. Ramalingaswamy Cheruku, Assistant Professor, NIT Warangal

Speaker delivered lecture on three powerful learning paradigms that bridge the gap between supervised and unsupervised approaches, and significantly enhance model performance:

1. **Semi-Supervised Learning**
2. **Self-Supervised Learning**
3. **Ensemble Learning**

These techniques are increasingly important in real-world AI systems where labelled data is limited or performance needs to be boosted.

#### Session 2: 11:30 AM – 1:30 PM

Topics: Reinforcement Learning, Active Learning

Speaker/Instructor: Dr. DLS Reddy, Associate Professor, Dept. of AIDS, CBIT

Speaker delivered lecture on two advanced learning techniques:

1. **Reinforcement Learning (RL)** – inspired by behavioural psychology
2. **Active Learning** – focused on efficient labelling strategies

Both are designed for **interactive learning** where the model improves by interacting with its environment or its teachers.

**Session 3: 2:30 PM – 4:30 PM**

Topics: Hands-on: Semi-, Self-Supervised, Ensemble, Reinforcement, Active Learning  
Speaker/Instructor: Sri. Sateesh Ambesange

**Day 3: April 26, 2025**

**Session 1: 9:15 AM – 11:15 AM**

Topics: Zero-Shot Learning, Few-Shot Learning  
Speaker/Instructor: Dr. D Rajesh Reddy, Scientist - F, ADRIN, Hyderabad

Speaker delivered lecture on two cutting-edge paradigms in machine learning:

1. **Zero-Shot Learning (ZSL)**
2. **Few-Shot Learning (FSL)**

These approaches are crucial when we have little or no training data for a new task or category — a common challenge in real-world AI applications.

**Session 2: 11:30 AM – 1:30 PM**

Topics: Inductive, Transductive, Contrastive Learning  
Speaker/Instructor: Dr. Damodar Reddy Edla, Associate Professor, NIT Goa

**Session 3: 2:30 PM – 4:30 PM**

Topics: Hands-on: Zero-/Few-Shot, Inductive, Transductive, Contrastive Learning  
Speaker/Instructor: Sri. Sateesh Ambesange

Speaker delivered lecture on three important learning paradigms in machine learning:

1. **Inductive Learning**
2. **Transductive Learning**
3. **Contrastive Learning**

These paradigms shape how models generalize knowledge and how they learn from structured or unlabelled data.

**Day 4: May 10, 2025**

**Session 1: 9:15 AM – 11:15 AM**

Topics: Multi-Task, Multi-Instance, Continual Learning  
Speaker/Instructor: Sri. Sateesh Ambesange

Speaker delivered lecture on three advanced and highly practical machine learning paradigms:

1. **Multi-Task Learning (MTL)**
2. **Multi-Instance Learning (MIL)**
3. **Continual Learning (CL)**

These techniques are designed to improve model efficiency, adaptability, and scalability — key needs in real-world AI.

**Session 2: 11:30 AM – 1:30 PM**

Topics: Federated Learning  
Speaker/Instructor: Dr. K Naveen Kumar, Postdoctoral Associate, MBZUAI, Abu Dhabi

Speaker delivered lecture on Federated Learning

- Federated Learning is a **revolutionary approach** to training models in a **distributed, private, and efficient** manner.
- It's crucial in domains where data **cannot be centralized** but **collaborative learning** is still needed.
- The future of AI is **decentralized and privacy-first**, and FL is a step in that direction.

**Session 3: 2:30 PM – 4:30 PM**

Topics: Hands-on: Transfer, Federated, Multi-Task/Instance, Continual Learning

Speaker/Instructor: Sri. Sateesh Ambesange

**Day 5: May 17, 2025**

**Session 1: 9:15 AM – 11:15 AM**

Topics: Representation Learning, Generative Learning

Speaker/Instructor: Dr. Ashu Abdul, Assistant Professor, SRM University-AP

Speaker delivered lecture on two foundational concepts in deep learning and AI:

1. **Representation Learning**
2. **Generative Learning**

These techniques are essential for building intelligent systems that **understand, compress**, and even **generate** new data.

**Session 2: 11:30 AM – 1:30 PM**

Topics: Hybrid Learning using STELA 5.0

Speaker/Instructor: Dr. S. Ramanarayana Reddy, Professor, IGDTUW, Delhi

Speaker delivered lecture on **Hybrid Learning**, particularly through the lens of an AI system known as **STELA 5.0**.

□ Hybrid learning blends the strengths of **multiple machine learning paradigms**, such as supervised, unsupervised, and reinforcement learning, to create more **robust, flexible**, and **intelligent systems**.

**Session 3: 2:30 PM – 4:30 PM**

Topics: Hands-on: Representation, Generative, Hybrid Learning

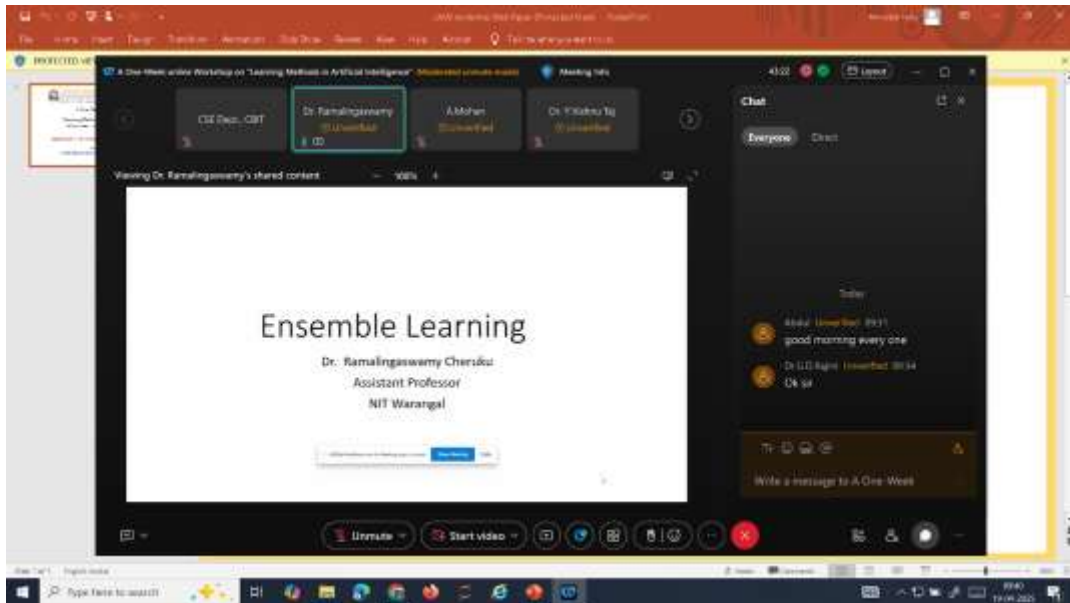
Speaker/Instructor: Sri. Sateesh Ambesange

**Few pics captured during the online sessions:**

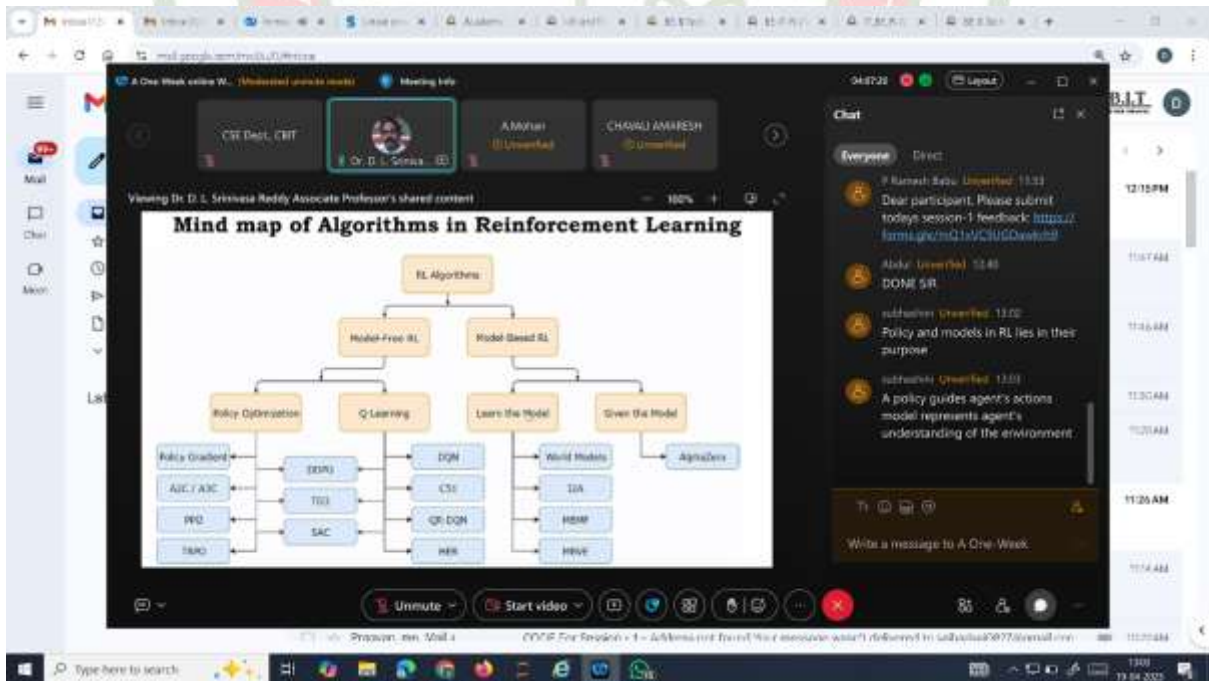


## Photographs :

19/04/2025 @ 9.15 am



19/04/2025 @ 11.30 am



A One-Week online Workshop on Learning Methods in Artificial Intelligence

Meeting Info

CSE Dept., CBT  
Sateesh Ambekar  
CHAWLA AMARESH  
RS Sagarad, Komaly

Viewing Sateesh Ambekar's shared content

Ensemble Learning

Chat

Everyone Direct

Satharaj: 11:45  
Unable to hear voice. Does it stopped for today's or continuing? plz can anybody share link to join because with morning link I can join but audio is not audible...

R Ramesh Babu: 11:45  
Dear participants, please submit today's session-2 feedback: <https://forms.gle/d8opVMOCT8T9pud>

Abdul: 11:52  
done sir

Unmute Start video

17/05/2025 @ 9.15 am

A One-Week online Workshop on Learning Methods in Artificial Intelligence

Meeting Info

Dr. G. Kiran Kumar  
CHUMALAI P. S  
Harsha Raj  
Dr. MANOJ KUMAR  
Srinivasan

Viewing Prasen Dutta's shared content

Image Classification

Participants (13)

Invite people

In the meeting (13)

CSE Dept., CBT  
Prasen Dutta  
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CHAWLA AMARESH  
Dr. G. D. Rajni  
Dr. G. Kiran Kumar  
Dr. MANOJ KUMAR M...

Workshop on Learning Methods in AI  
CHUMALAI P. S. joined at

Unmute Start video Share Breakout sessions

A One-Week online Workshop on "Learning Methods in Artificial Intelligence"

Participants (30)

Dr. D Jayaram Unverified

KASHWINI Unverified

Sateesh Ambesange (Pragy... Unverified

K.Priyanka GCET

g.devil bai Unverified

Participants

Chat

Unmute Start video Share Breakout sessions

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18:09 17-04-2025

12/04/2025

A One-Week online W... (Moderated unmu... Meeting Info

Participants (59)

S Durga Devi, Asista... CSE Dept., CBIT g.devil bai Unverified

Viewing Ravinder Reddy's applications 100%

Supervised Learning

Learning Algorithm

New Input x

Model

Output y

Participants (59)

S Durga Devi, Assistant Professor

CSE Dept., CBIT

Ravinder Reddy

(160124742015/Vijayit Reddy

160124742005 - Jasmine Mia

160124742008 - V. Surya Kiran

160124742009 - V.Vani

160124742011 - G.Prasuna

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18:08 12-04-2025



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S. Durga Devi, Asista... CST Dept., CBIT EZHUMALAI P Unverified g.devi bai Unverified Dr. G. Kiran Kumar Unverified Ravinder R. Unverified

Viewing Ravinder Reddy's applications 100%

Annotate

# Learning Approaches

## Supervise and Unsupervised Learning

Dr. R. Ravinder Reddy  
Professor, Department of CSE, CBIT

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27°C Bangalore Search 10:40 AM 12-04-2021



A One-Week online W... (Moderated unrate mode) Meeting Info 35:15 Layout

B. Ramadasu Unverified

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VEERAVALLI DURGHA Unverified

Saigrasad Goud Kompaty

REDDYGARI ORITHI

Padmauree Unverified

Teja Unverified

Zubeda Unverified

Shakir Sikandar Unverified

Dr. G. Jeyakodi Unverified

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K. Priyanka (kpriyanka.cse...) Unverified

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(Moderated unmute mode) A One-Week online Workshop on "Learning Methods in Artificial Intelligence" Layout Meeting info

CSE Dept., CBIT Sateesh Ambesa... S Durga Devi, Ass... K.Priyanka GCET

Viewing Sateesh Ambesange's shared content 100%

Several Learning - Approaches

Participants (40)

Search

In the meeting (40)

Dr. K. Spandana, Asst. P... Me Unverified

CSE Dept., CBIT Host

Sateesh Ambesange Presenter Unverified

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Show desktop

Dr. K. Spandana Unverified CSE Dept., CBIT pulavi Nagulapally Unverified A.Mohan Unverified Dr. Y.Vishnu Tej Unverified Dr. Ramalingaswamy Unverified

Viewing Dr. Ramalingaswamy's shared content 100%

Ensemble Learning

Dr. Ramalingaswamy Cheruku  
Assistant Professor  
NIT Warangal

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Dr. R. Spandana (Unverified) CSE Dept., CBIT pallavi Nagulapally (Unverified) A.Mohan (Unverified) Dr. Y.Vishnu Tej (Unverified) Dr. Ramalingaswamy (Unverified)

Viewing Dr. Ramalingaswamy's shared content 100%

### Bias Variance Tradeoff in Machine Learning

Unmute Start video Share AI Assistant Raise

## II Session

Dr. R. Spandana (Unverified) A.Mohan (Unverified) Dr. D. L. Srinivas (Unverified) CSE Dept., CBIT CHAVALI AMARESH (Unverified) DR.P.SWARNALATHA (Unverified)

Viewing Dr. D. L. Srinivasa Reddy Associate Professor's shared content 100%

### What is Reinforcement Learning?

- Reinforcement learning is a type of machine learning where an agent learns to make decisions by taking actions in an environment.
- The agent's goal is to maximize a cumulative reward over time.
- Think of it as a digital playground where the agent explores, experiments, and adapts to optimize its performance continuously.

Unmute Start video Share AI Assistant Raise

10/05/2025





**Enclosed:**

- Event Brochure
- Registered List
- Attendance forms
- Feedback forms
- Approval Letters
- Sample Certificate

**Coordinators**

1. Prof. S China Ramu, Professor, Dept. of CSE, CBIT
2. Dr. Kolla Morarjee, Associate Professor, Dept. of CSE, CBIT
3. Dr. G Kiran Kumar, Associate Professor, Dept. of CSE, CBIT

**Co-Coordiators**

1. Sri. B Ramadasu, Assistant Professor, Dept. of CSE, CBIT
2. Dr. K Spandana, Assistant Professor, Dept. of CSE, CBIT
3. Sri. A Mohan, Assistant Professor, Dept. of CSE, CBIT

## Report on FDP titled “The AI Beyond Frontier: Recent Breakthroughs and Next-Gen Prospects”

21 April.2025 to 25 April 2025

Day 1 (FN):

### Session 1: Inaugural Session and Keynote Address on Agentic AI

The **Inaugural Session** of the conference commenced with a warm welcome extended to esteemed guests, researchers, faculty members, and participants. The session marked the formal beginning of the academic gathering focused on **emerging trends in Artificial Intelligence**, with a special emphasis on **Agentic AI**—a transformative paradigm in the field.

**Agentic AI** refers to a new generation of AI systems designed to act with greater autonomy, proactivity, and goal-orientation, much like intelligent agents. Unlike traditional reactive models, agentic AI systems are capable of setting objectives, reasoning over long horizons, adapting to dynamic environments, and interacting intelligently with users and other systems. This approach is foundational to developing **advanced AI applications** in robotics, personalized assistants, simulation environments, and self-improving agents.

#### Keynote Address Highlights

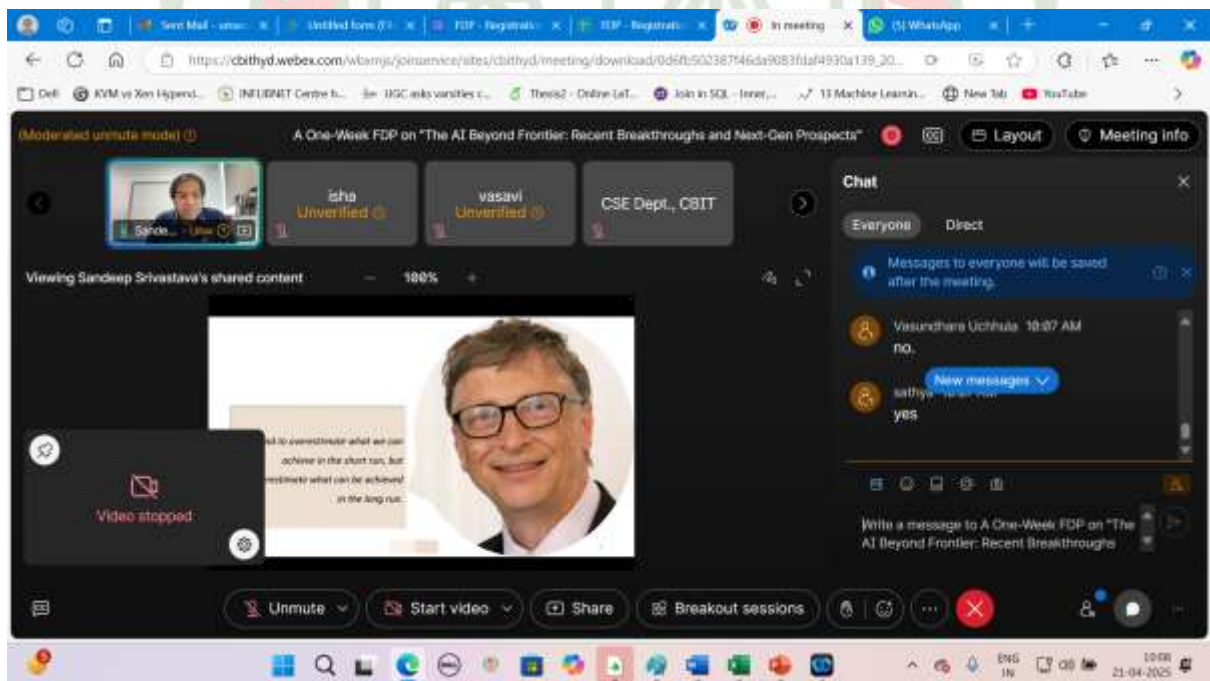
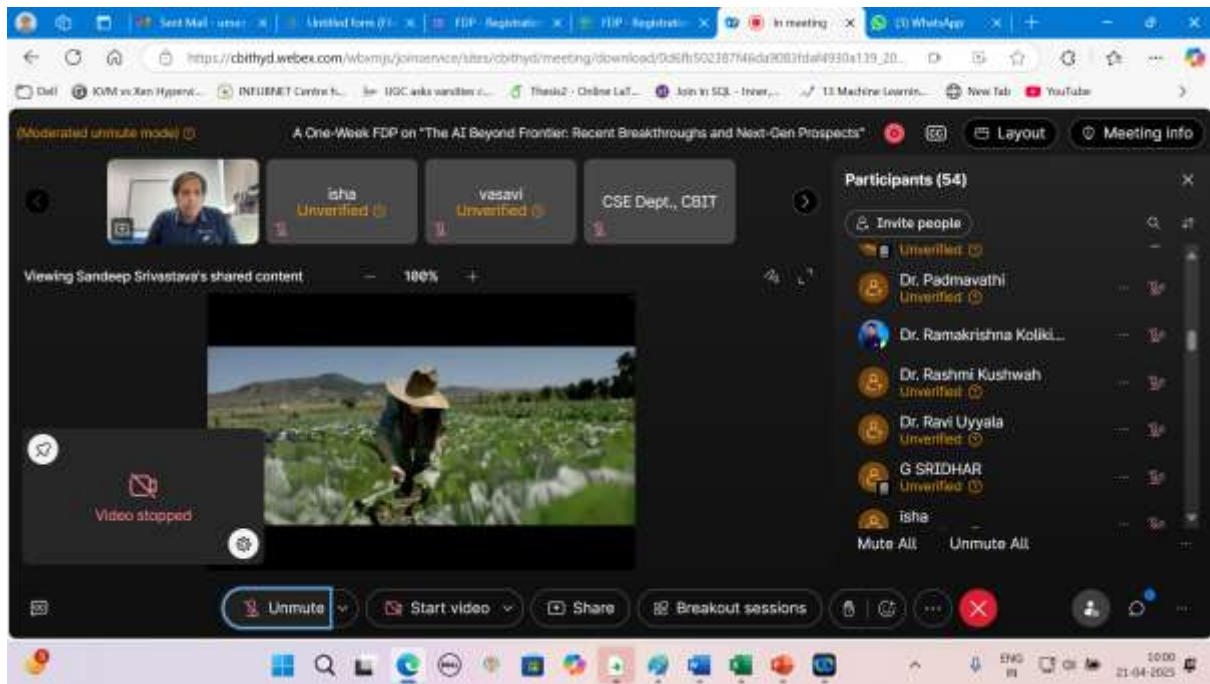
The keynote address was delivered by a distinguished speaker—[Insert Speaker Name, Title, Affiliation]—a thought leader in Artificial Intelligence and Cognitive Systems. The speaker delivered a compelling talk on:

- **The Evolution of Agentic AI:** From rule-based systems to large language models (LLMs), and now toward autonomous AI agents capable of decision-making and planning.
- **Architecture of Agentic Systems:** Key components such as memory, planning modules, feedback loops, and multi-agent collaboration.
- **Applications and Impact:** Use cases across healthcare, education, autonomous systems, and enterprise workflows, where agentic AI can optimize decision-making and automate complex tasks.
- **Ethical and Safety Considerations:** The need for controllability, alignment with human values, and safeguards against unintended consequences in autonomous AI behavior.

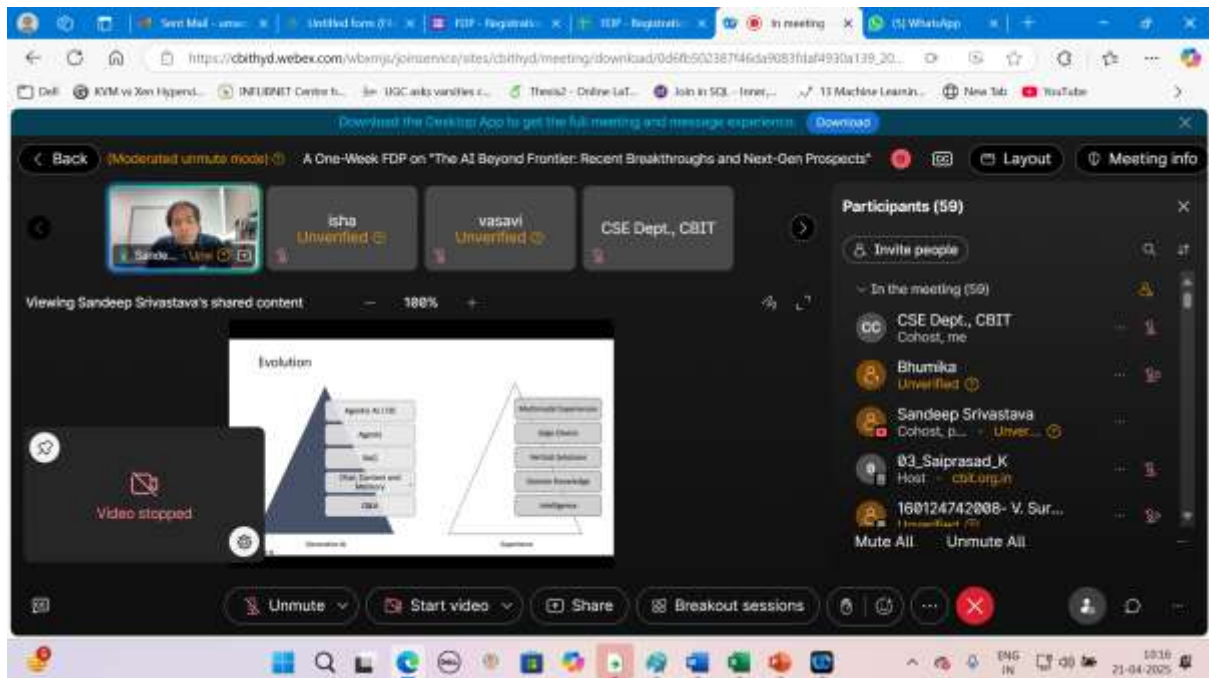
The address also emphasized the need for **interdisciplinary collaboration** to responsibly advance agentic AI, involving not only computer scientists and engineers but also ethicists, legal scholars, and domain experts.

#### Outcomes of the Session

The inaugural and keynote session set the tone for the rest of the event, inspiring participants to explore the frontiers of AI with a **focus on autonomy, intelligence, and ethical design**. It also highlighted the growing relevance of agentic AI in solving real-world problems and shaping the future of intelligent systems.







## Day 1 (AN):

### Session 2: Edge AI and On-device processing

**Speaker:** Mr. Prathamesh Tugaonkar, Principal Software Engineer, Plevenn  
**Topic:** "Smarter Devices, Faster Decisions: The Future with Edge AI and On-Device Processing"

The session, delivered by **Mr. Prathamesh Tugaonkar**, a seasoned expert in embedded systems and AI engineering, provided deep insights into the growing field of **Edge Artificial Intelligence (Edge AI)** and the transformative potential of **on-device machine learning**. Drawing on his experience at **Plevenn**, a company at the forefront of intelligent systems, Mr. Tugaonkar elaborated on how moving AI processing from cloud data centers to local edge devices is revolutionizing real-time decision-making.

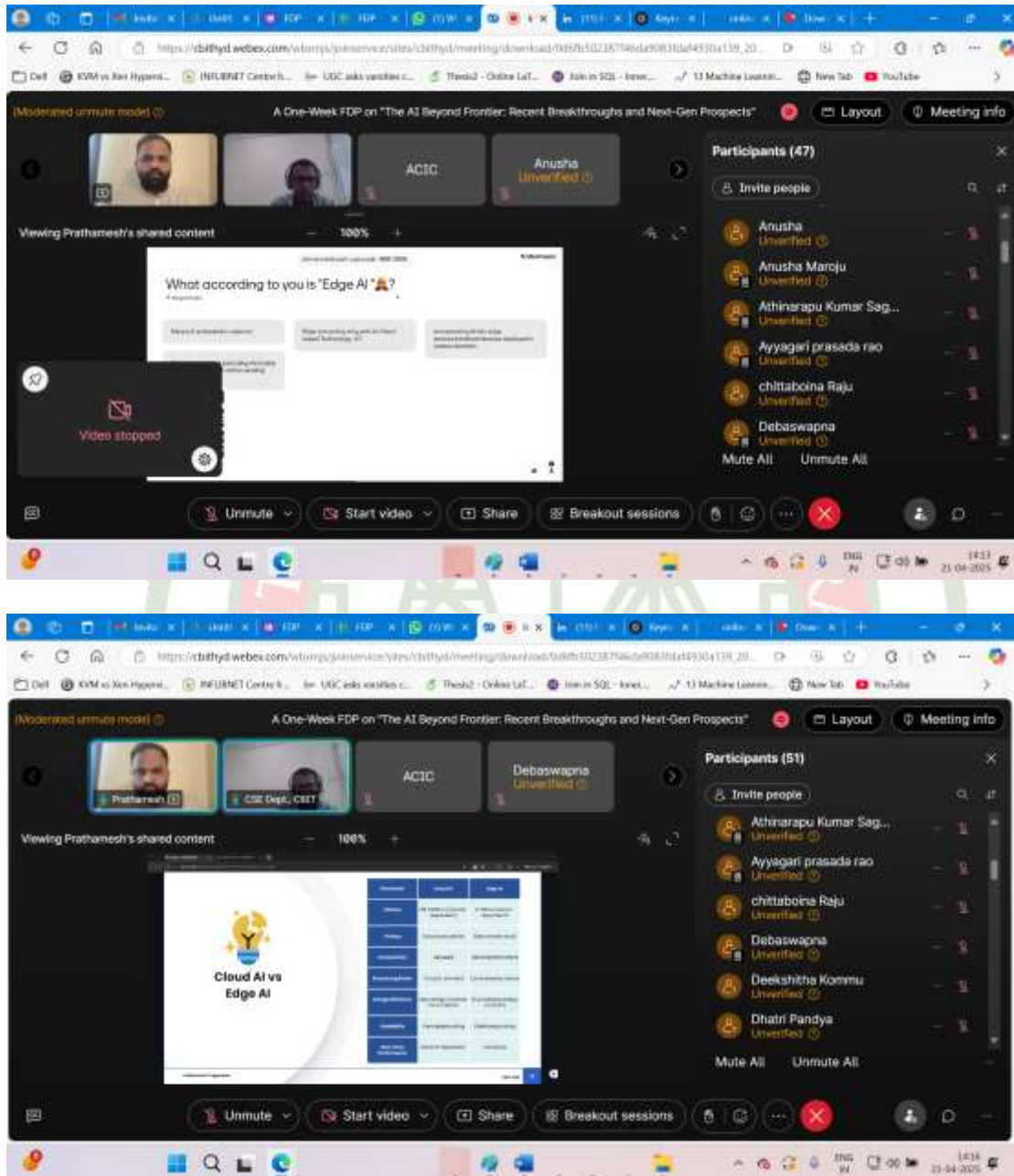
### Key Highlights of the Session:

- Understanding Edge AI:** Mr. Tugaonkar began by defining Edge AI as the deployment of machine learning models directly on devices such as smartphones, IoT sensors, cameras, drones, and wearable health monitors. He explained how this reduces latency, enhances privacy, and minimizes reliance on continuous cloud connectivity.
- Architectures and Technologies:** The session covered key components of an Edge AI pipeline, including lightweight neural networks, quantization techniques, and hardware accelerators (e.g., NPUs, TPUs). He also demonstrated how frameworks like **TensorFlow Lite**, **ONNX**, and **Edge Impulse** are used to optimize AI models for edge deployment.
- Use Cases and Applications:** Several real-world applications were discussed:
  - Healthcare:** Vital sign monitoring and anomaly detection on wearables.
  - Smart Cities:** Real-time surveillance and traffic pattern analysis.
  - Agriculture:** On-field crop health assessment using drones.
  - Manufacturing:** Predictive maintenance using edge-based anomaly detection.
- Challenges in Edge AI Deployment:** Mr. Tugaonkar addressed challenges such as limited computational resources, energy constraints, model compression trade-offs, and device heterogeneity. He also highlighted strategies for model pruning, edge-cloud synergy, and federated learning for collaborative, privacy-preserving model updates.

- **Future**

The session concluded with a forward-looking view on the integration of **Edge AI with 5G**, the emergence of **self-learning edge devices**, and the role of **agentic AI** in enabling proactive, context-aware systems.

**Trends:**



Day 2 (FN) on 22.April.2025:

Session 2: Large Language Models: Fundamentals and Applications

**Speaker:** Mr. Santosh Chapaneri, Lead Data Scientist, Wolters Kluwer | Ex-Microsoft (USA) | MS – University of Arizona

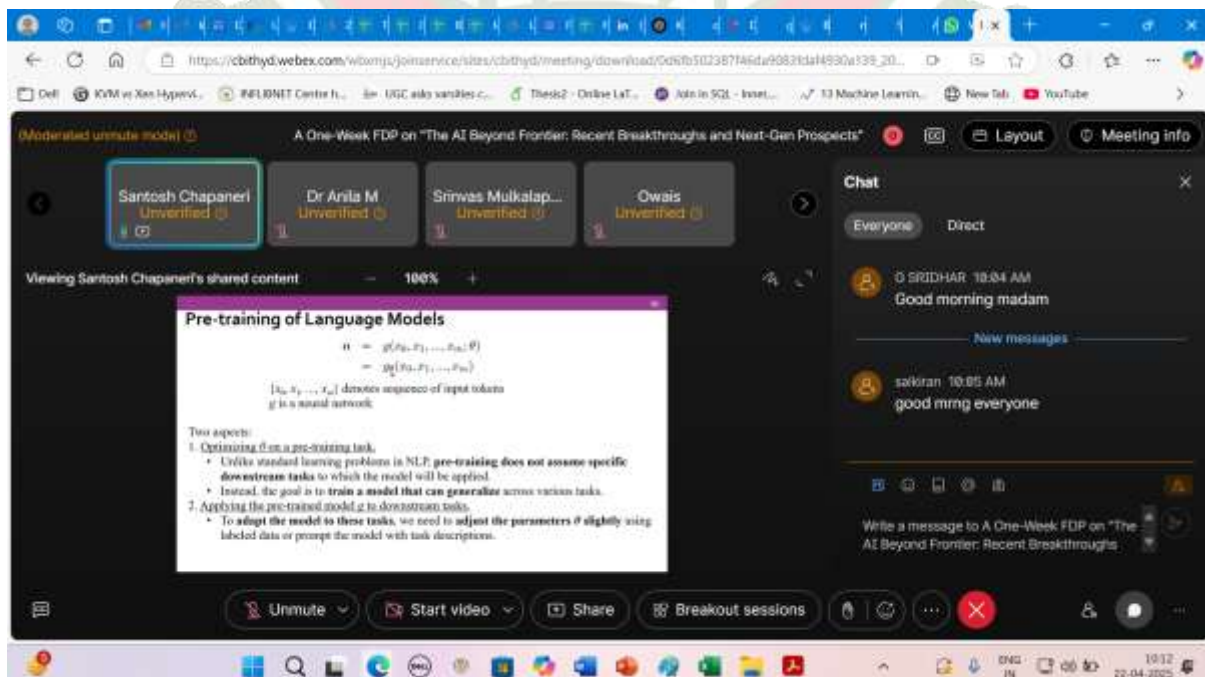
**Topic:** "Large Language Models: Fundamentals and Applications in the Real World"

In this highly engaging and insightful session, **Mr. Santosh Chapaneri**, a seasoned data science professional with international experience at leading tech organizations, delved into the **fundamentals, architecture, and practical use cases** of **Large Language Models (LLMs)**. Drawing from his extensive work in AI research and enterprise

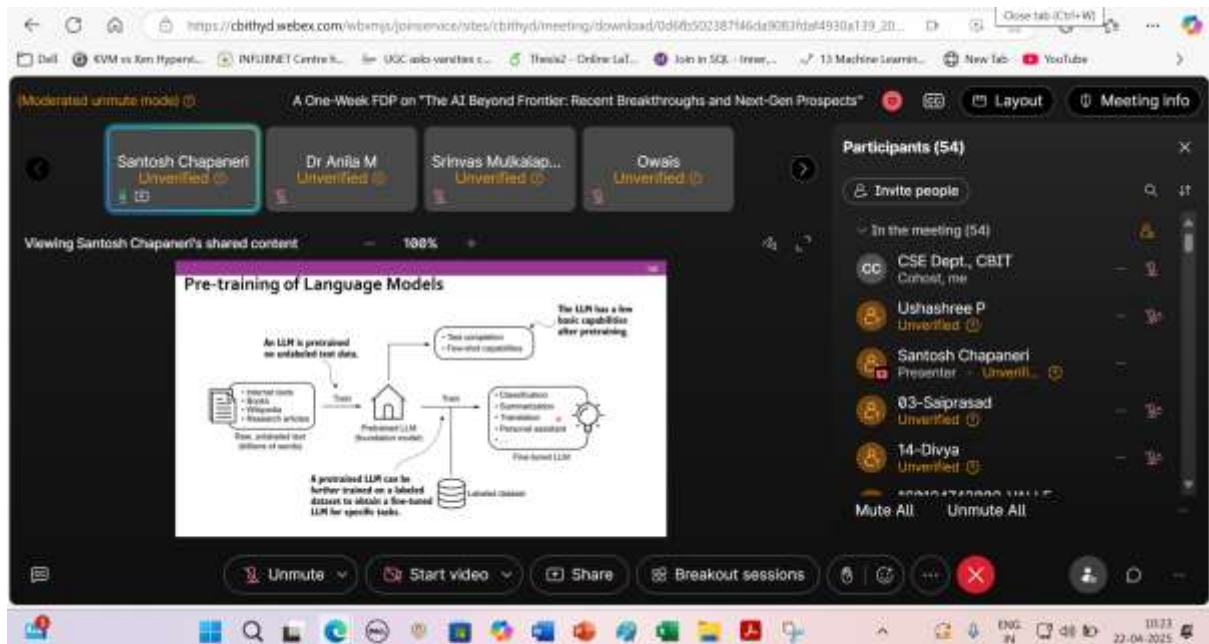
deployment, Mr. Chapanerri provided both a **conceptual foundation and a real-world perspective** on how LLMs are shaping the future of artificial intelligence.

## Session Highlights:

- Understanding LLMs:**  
 Mr. Chapanerri began by explaining the core principles behind LLMs such as GPT, BERT, and LLaMA, focusing on their transformer-based architecture, training methodologies, and the evolution of model scaling laws. He simplified complex concepts like attention mechanisms, tokenization, and pre-training vs. fine-tuning.
- Key Capabilities of LLMs:**  
 The session showcased how LLMs excel in a wide array of tasks, including:
  - Natural language understanding and generation
  - Text summarization and translation
  - Code generation and question answering
  - Conversational AI and semantic search
- Enterprise and Industry Applications:**  
 Real-world case studies were shared from industries such as:
  - Legal & Regulatory Compliance** (Wolters Kluwer): Automating contract analysis and compliance checks.
  - Healthcare**: Extracting insights from clinical notes and patient records.
  - Customer Support**: Implementing AI-driven chatbots for scalable customer engagement.
  - Software Development**: Using LLMs for code assistance and documentation generation.
- Risks, Ethics, and Mitigation:**  
 Mr. Chapanerri addressed important concerns related to **bias, hallucinations, privacy, and explainability** in LLMs. He discussed the need for responsible AI practices, model audits, and fine-tuning with domain-specific datasets to ensure safety and relevance.
- Interactive Demonstrations and Q&A:**  
 The session also included interactive demonstrations of LLM outputs and an engaging Q&A segment where participants explored the future of generative AI in education, law, and scientific research.







Day 2 (AN) and Day 3 (FN) Session 3 & 4:

### Quantum AI, and applications

**Speaker:** Mr. Syamasundar Santosh Kumar Gopasana  
**Role:** Quantum and AI Technology Innovation, Accenture India  
**Topic:** "Quantum AI: Converging the Future of Intelligence and Computation"

The session, led by **Mr. Syamasundar Santosh Kumar Gopasana**, a leading innovator in Quantum Computing and AI at **Accenture India**, offered a forward-thinking overview of how **Quantum Computing and Artificial Intelligence (AI)** are merging to create groundbreaking solutions for some of the most complex computational problems in science, business, and technology.

### Session Overview and Highlights:

- Introduction to Quantum Computing:**  
 The session began with a primer on quantum mechanics principles—**superposition, entanglement, and quantum gates**—and how they differentiate quantum systems from classical computers. Mr. Gopasana clearly articulated how quantum computing enables **parallelism at a massive scale**, making it uniquely suited for high-dimensional optimization and simulation problems.
- What is Quantum AI?**  
 Mr. Gopasana introduced **Quantum AI** as the intersection of quantum computing and artificial intelligence. He explained how quantum techniques can:
  - Accelerate AI model training
  - Enable faster optimization in deep learning
  - Improve feature selection and dimensionality reduction in large datasets
  - Support advanced pattern recognition and generative models
- Real-World Applications:**  
 The talk explored emerging use cases of Quantum AI, including:
  - Drug Discovery:** Quantum-enhanced molecular simulation for faster pharmaceutical development.
  - Finance:** Portfolio optimization and fraud detection using quantum machine learning.
  - Logistics and Supply Chain:** Solving NP-hard routing and scheduling problems.
  - AI Model Optimization:** Quantum-inspired algorithms for more efficient training of AI models.
- Current Tools and Ecosystem:**  
 Attendees were introduced to leading platforms such as:
  - Qiskit** (IBM)
  - Cirq** (Google)

- PennyLane (Xanadu)
- Hybrid frameworks integrating classical and quantum processing
- **Challenges and Road Ahead:**  
The session also addressed the current limitations, such as **quantum decoherence**, **hardware scalability**, and **error correction**, while highlighting the rapid progress in **quantum cloud platforms**, **hybrid quantum-classical models**, and **corporate investment** in quantum research.

The screenshot shows a Zoom meeting window titled "A One-Week FDP on 'The AI Beyond Frontier: Recent Breakthroughs and Next-Gen Prospects'". The meeting is moderated and unmuted. The main content area displays a slide titled "Key quantum physics concepts necessary for QC". The slide lists three concepts: Superposition, Entanglement, and Interference, each with a brief description and a diagram. Below these, it mentions "Quantum Algorithms" and their application in solving "NP-complete" problems. The right sidebar shows a list of participants (51) and a "Participants (51)" panel. The bottom of the window shows the Windows taskbar with various application icons and the system clock indicating 14:34 on 22-04-2025.

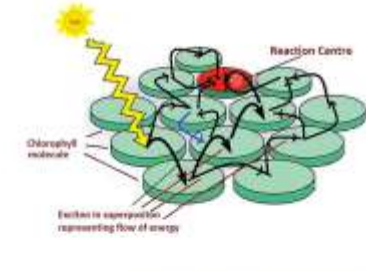
This screenshot shows the same Zoom meeting window, but the slide content has changed to focus on "Superposition". It explains that a qubit can be in state  $|0\rangle$  and  $|1\rangle$  at the same time, represented by the equation  $|\psi\rangle = \alpha|0\rangle + \beta|1\rangle$ . It also mentions "Schrödinger's cat" as a thought experiment of quantum superposition. The right sidebar shows a list of participants (50) and a "Participants (50)" panel. The bottom of the window shows the Windows taskbar with various application icons and the system clock indicating 14:36 on 22-04-2025.

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Speaking: Syamasundar Gopasana

Viewing Syamasundar Gopasana's shared content 100%

### Quantum Walks



Recent research in the field of Quantum Biology suggests that the quantum random walk may be a key step in explaining efficient process of photosynthesis.

Excitation is superposition representing flow of energy

Reaction Centre

Chlorophyll molecules

Chat

Everyone Direct

Mahesh 2:34 PM  
is it come to reality sir:sofar

sridhar Reddy kanna 2:34 PM  
The number particularly how we know 1001  
For any number same right?? It takes The time to process sir

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Speaking: Syamasundar Gopasana

Viewing Syamasundar Gopasana's shared content 100%

### Entanglement

#### Unbreakable Correlation



Let's say you have two entangled balls, one in the red box, the other in the blue box. In this scenario, the balls are in a state of superposition, or both red and blue at the same time.

When you observe the balls, they will be in a state of superposition, or both red and blue at the same time.

The objects remain correlated even over vast distances. Scientists have of entangled objects as really being a single object.

"It may be tempting to think that the particles are somehow communicating with each other across these great distances, but that is not the case," says Thomas Vidick, a professor of computing and mathematical sciences at Caltech. "There can be correlation without communication," and the particles "can be thought of as one object." - Caltech Science Exchange

Participants (57)

Invite people

In the meeting (57)

CSE Dept., CBIT  
Host, me

Syamasundar Gopasana  
Cohost, p... Unmuted

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gmail.com

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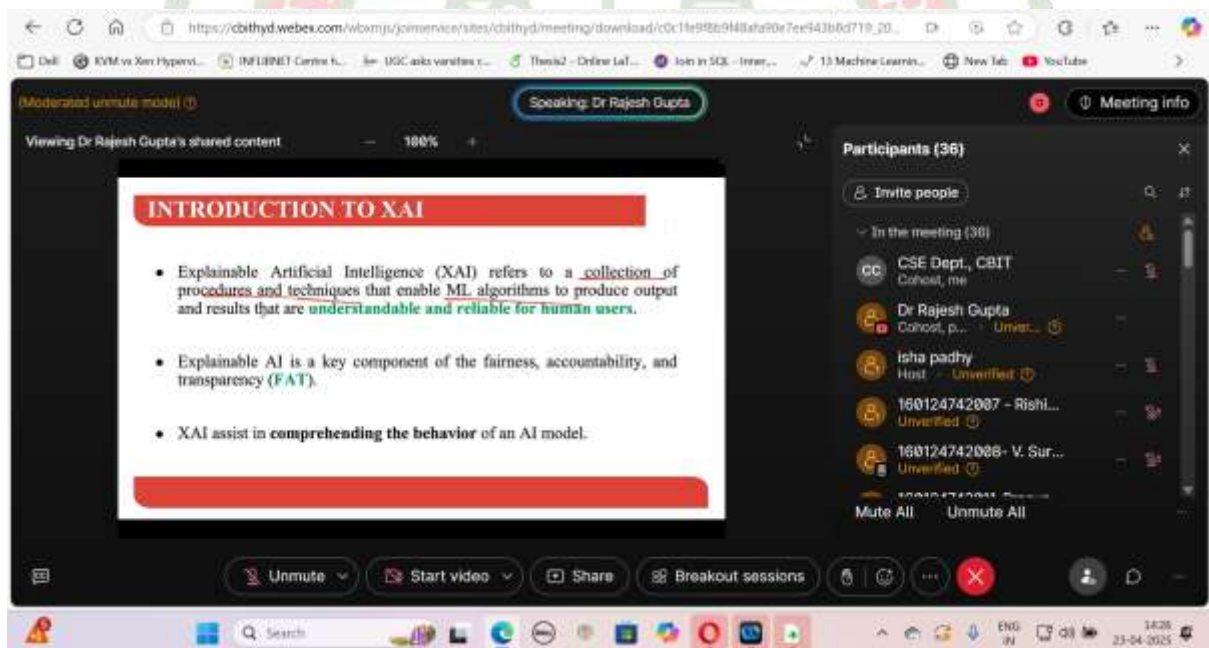
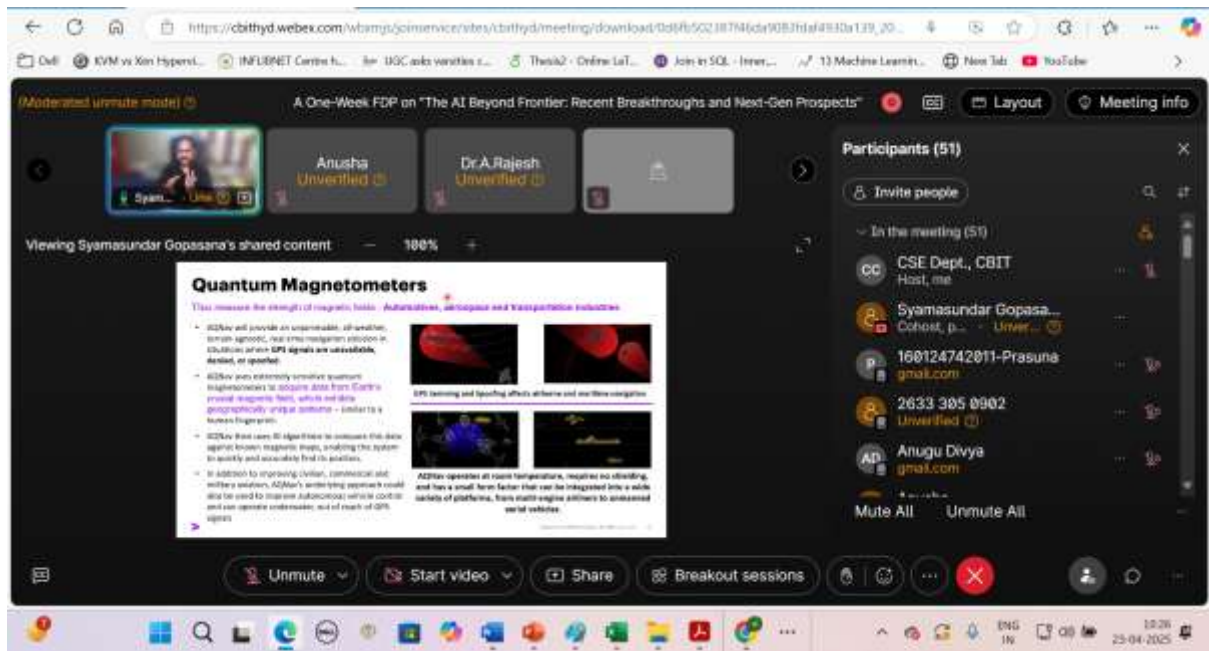
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## Day 3 (AN) Day 4 (AN) Session 6 & 8:

**Speaker:** Dr. Rajesh Gupta  
**Affiliation:** Professor, Nirma University  
**Topic:** "Enhancing AI Intelligence: Fine-Tuning and Retrieval-Augmented Generation in GenAI Systems"

In this highly informative and technically rich session, **Dr. Rajesh Gupta**, a leading academic and researcher in Artificial Intelligence at **Nirma University**, explored the cutting-edge developments in **Generative AI (GenAI)** with a focus on **advanced model customization** and the powerful architecture of **Retrieval-Augmented Generation (RAG)**.

## Session Highlights:

- **Understanding Advanced Generative AI:** Dr. Gupta began with a structured overview of **transformer-based generative models** like GPT, T5, and BERT derivatives. He explained their architecture, large-scale pretraining, and how they have revolutionized content generation, summarization, translation, and coding tasks.
- **Model Fine-Tuning Techniques:** The session explored methods of adapting base models to specific tasks and domains through:
  - **Full fine-tuning**
  - **Parameter-efficient tuning** (e.g., LoRA, Adapter Layers)
  - **Prompt engineering and tuning**

Dr. Gupta emphasized the importance of domain-specific data and explained the trade-offs between cost, performance, and generalization.

- **Introduction to Retrieval-Augmented Generation (RAG):** A key highlight of the session was the deep dive into **RAG architecture**, which combines:
  - **Retrieval systems** (e.g., vector databases like FAISS or Pinecone)
  - **Large language models** to generate informed, accurate responses using external, dynamic knowledge bases.

This hybrid approach was shown to significantly enhance **context relevance**, **factual accuracy**, and **memory extension** in GenAI systems.

- **Use Cases and Applications:** Dr. Gupta demonstrated the application of fine-tuned and RAG-enabled models in:
  - **Enterprise chatbots and knowledge assistants**
  - **Legal document summarization**
  - **Academic research copilots**
  - **Healthcare query answering**

He also discussed how organizations are using RAG to integrate **internal proprietary data** with large models securely and efficiently.

- **Tools and Frameworks Discussed:** Technologies like **Hugging Face Transformers**, **LangChain**, **Haystack**, and **OpenAI APIs** were introduced, showing how they enable rapid prototyping and deployment of fine-tuned and RAG-based systems.
- **Challenges and Best Practices:** Dr. Gupta addressed key challenges such as **hallucination**, **data privacy**, **model evaluation**, and **computational constraints**, offering practical guidelines for building trustworthy and scalable GenAI systems.

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Speaking: Dr. Rajesh Gupta

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### GRAD-CAM

Participants (44)

- CSE Dept., CBIT
- Dr. Rajesh Gupta
- Isha padhy
- 160124742007 - Rishi...
- 160124742008 - V. Sur...

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A One-Week FDP on "The AI Beyond Frontier: Recent Breakthroughs and Next-Gen Prospects"

Viewing Dr. Rajesh Gupta's shared content 100%

### CROSS-DEVICE VS CROSS-SILO FL

Participants (47)

- CSE Dept., CBIT
- Dr. Rajesh Gupta
- Isha padhy
- 160124742007 - Rishi...
- 160124742008 - V. Sur...

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#### Day 4 (FN) Session 7: Explainable AI and Trustworthy AI for the modern applications

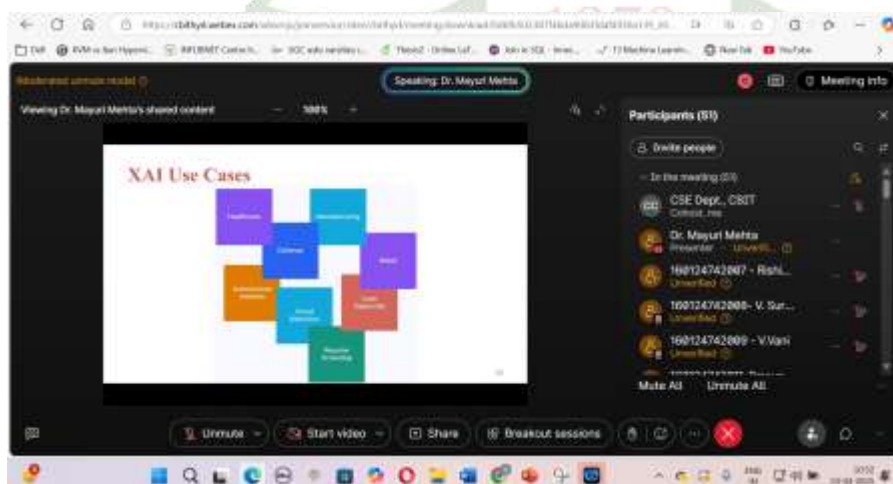
**Speaker:** Dr. Mayuri Mehta  
**Role:** Professor, Sarvajani College of Engineering and Technology | Expert in Explainable AI  
**Topic:** "Building Trustworthy AI Systems: The Role of Explainability in Modern Applications"

In this insightful session, **Dr. Mayuri Mehta**, a recognized academic expert in **Explainable Artificial Intelligence (XAI)**, addressed the pressing need for **transparent, ethical, and trustworthy AI systems** in real-world applications. With the growing integration of AI into critical domains—such as healthcare, finance, education, and autonomous systems—the session emphasized why **"black-box" models are no longer sufficient** and how **explainability is key to AI adoption and accountability**.



## Session Highlights:

- The Need for Explainable AI:**  
 Dr. Mehta opened the session by explaining how most modern AI models, particularly deep learning architectures, function as **opaque decision-makers**. She outlined the risks of using such models in high-stakes environments where **understanding the rationale behind AI predictions** is crucial for trust and regulatory compliance.
- Core Concepts in XAI and Trustworthy AI:**  
 The session introduced foundational concepts including:
  - Post-hoc explanations (e.g., SHAP, LIME, Grad-CAM)
  - Interpretable models vs. black-box models
  - Fairness, accountability, and transparency (FAT) in AI
  - Bias detection and mitigation
- Applications and Case Studies:**  
 Dr. Mehta shared practical examples where explainable and trustworthy AI models have been successfully applied:
  - Healthcare:** Explaining AI diagnoses in medical imaging and clinical decision support
  - Finance:** Justifying credit risk assessments and fraud detection outcomes
  - Legal Tech:** Ensuring fair and auditable legal document analysis
  - Education:** Personalized learning with traceable feedback and recommendation systems
- Frameworks and Tools:**  
 The session introduced tools and libraries such as **SHAP**, **LIME**, **Eli5**, and **AI Fairness 360** from IBM, enabling participants to implement explainable solutions in practice.
- Ethical Implications and Future Outlook:**  
 Dr. Mehta concluded by discussing the **ethical responsibilities of AI developers**, the importance of **human-in-the-loop systems**, and the growing relevance of **regulatory frameworks** like the EU AI Act that mandate transparency and explainability in AI deployments.



## Day 5 (FN):

**Speaker:** Mr. Kameshwara Pavan Kumar Mantha  
**Role:** Principal Software Engineer, ORBCOMM  
**Topic:** "Autonomous AI Agents and Multi-Agent Systems: Toward Intelligent, Decentralized Problem Solving"

In this engaging and forward-looking session, Mr. Kameshwara Pavan Kumar Mantha, an expert in embedded intelligence and real-time systems at ORBCOMM, delivered a comprehensive overview of Autonomous AI Agents and the emerging field of Multi-Agent Systems (MAS). His talk highlighted how these intelligent systems are driving innovation in distributed decision-making, real-time coordination, and autonomous operations across domains.

### Session Highlights:

- **Understanding Autonomous AI Agents:** Mr. Mantha explained that autonomous agents are AI-driven entities capable of perceiving their environment, making decisions, and acting independently to achieve specific goals. These agents integrate techniques from reinforcement learning, planning, and adaptive behavior modeling.
- **Introduction to Multi-Agent Systems (MAS):** The session introduced multi-agent systems as environments where multiple autonomous agents interact, collaborate, or compete to solve complex, decentralized problems. Key principles discussed included:
  - Agent communication and negotiation
  - Distributed coordination and control
  - Emergent behaviors in agent ecosystems
- **Core Architectures and Technologies:** Mr. Mantha outlined popular frameworks such as JADE, ROS, and Microsoft Project Bonsai, and covered agent architectures like Belief-Desire-Intention (BDI), reactive vs. deliberative agents, and swarm intelligence.
- **Real-World Applications:** The talk highlighted impactful use cases of autonomous and multi-agent systems:
  - Logistics and Fleet Management: Coordinated route planning using multiple intelligent agents.
  - Smart Grids and IoT: Distributed energy management using sensor-based agents.
  - Space and Satellite Systems: Autonomous fault detection and system recovery, especially relevant to ORBCOMM's work in satellite communication.
  - Gaming and Simulation: Strategy learning and environment adaptation using reinforcement learning agents.
- **Challenges in MAS Development:** Mr. Mantha discussed practical challenges such as:
  - Conflict resolution among agents
  - Scalability and robustness of distributed systems
  - Security, trust, and agent misbehavior
  - Standardization of communication protocols
- **Future Directions:** The session concluded with insights on agentic AI, the convergence of LLMs with autonomous agents, and the role of multi-agent simulation environments in training next-generation decision-making systems for robotics, defense, and smart infrastructure.

Department of Computer Science & Engineering  
is Organizing

A One Week National Level **Faculty Development Programme** on  
**The AI Beyond Frontier:  
Recent Breakthroughs and Next-Gen Prospects**

April 21-25, 2025 | Time : 10:00 AM - 03:30 PM

**Sri. Kameshwara Pavan  
Kumar Mantha**  
Principal Software Engineer, ORBCOMM.

**Topic:**  
Autonomous AI Agents and  
Multi Agent Systems

25<sup>th</sup> April 2025 | 10:00 AM - 11:30 AM

**Session-9**

**RESOURCE  
PERSON**

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**46**  
years

Date: 15.04.2025

## Department of Computer Science and Engineering

A brief report on the **Short Term Training Program (Value added Course) on “Upgrading Skills in Java Programming”**, organized in offline mode on the following days 15th, 22nd, 29th March, 2025, 12th April from 09.30 AM to 04.30 PM in CSE M.Tech Lab and in online mode on 13th April, 2025 from 09.30 AM to 12.30 PM, by the Department of Computer Science and Engineering.

The resource persons for all the sessions of the STTP were faculty of CSE Department and faculty coordinators are Dr. M Venkata Krishna Reddy, Smt. I. Srujana, Smt. Ch.Madhavi Sudha, and Smt A. Sangeetha, Assistant Professor(s) from Department of Computer Science and Engineering.

This program is open to all the UG and PG Students, researchers, Industry Professionals, and faculty. The number of participants who attended was 89. The inaugural session was hosted by Smt. I. Srujana, faculty coordinator and given a brief introduction about the STTP. Prof. S. China Ramu, Head of the Department delivered opening remarks during inaugural session. Valedictory session was hosted by Dr. M. Venkata Krishna Reddy, faculty coordinator and the feedback was collected from the participants at the end of the STTP. Dr. M. Venkata Krishna Reddy proposed a vote of thanks.

The program aimed to enhance the understanding of programming concepts among students and faculty while strengthening their ability to apply these concepts using the Java programming language. It also sought to equip

students with the confidence to excel in placement opportunities and develop their projects using an object-oriented approach.

### Inaugural Session:

The inaugural session was organized from 09:30 AM to 10:45 AM



Ms. I Srujana, Assistant Professor, Dept. of CSE and Faculty Coordinator hosting the Inaugural Session



Smt. I. Srujana, Assistant Professor, CSE Department welcoming the gathering and briefly introduce the purpose of the STTP





Prof. S. China Ramu, Professor & Head, Dept. of CSE, addressing the participants during the Inaugural Session



Participants of the program in the Inaugural session



The day-wise summary of the STTP is given below.

### **Day-1-(15-03-2025)**

#### Session 1:

Following the inaugural session, Session-1 was conducted from 11:15 AM to 12:45 PM by Smt. S. Durga Devi, Assistant Professor, Department of CSE. She began the session with an engaging example illustrating the need for Java programming. She provided participants with a comprehensive overview, covering topics such as an Introduction to Java, Setting up the Java Development Environment, Writing Your First Java Program, and the concepts of Classes and Objects.



Smt. S. Durga Devi, Asst. Professor, Dept. of CSE, delivering the session 1 on Day 1

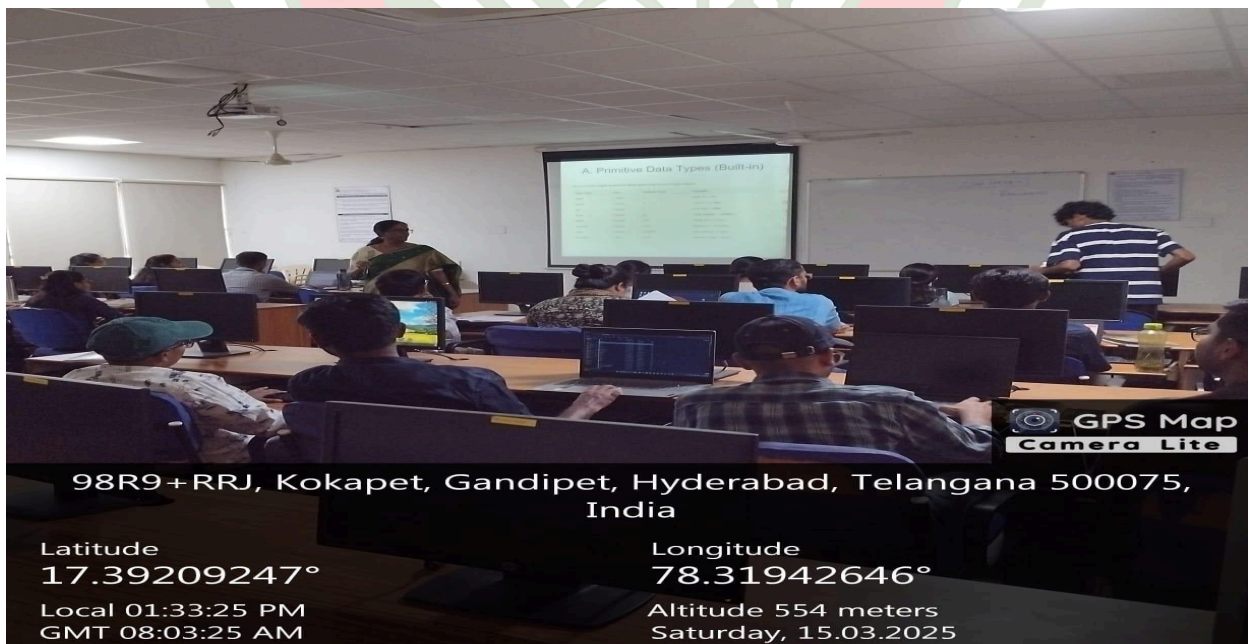
#### Session-2:

Session 2 conducted from 1:15 PM to 2:45 PM by Prof. S. Chinaramu, Professor & Head, CSE Department, along with Smt. I. Srujana, Assistant Professor, CSE Department, has focused on Core concepts of java fundamentals. They provided detailed explanations on essential Java concepts, including Data Types, Variables, and Operators. The session also covered

Control Flow Statements and Arrays, helping participants gain a strong foundation in Java programming basics.



Prof. S. China Ramu, Professor & Head, Dept. of CSE, delivering the session 2 on Day 1

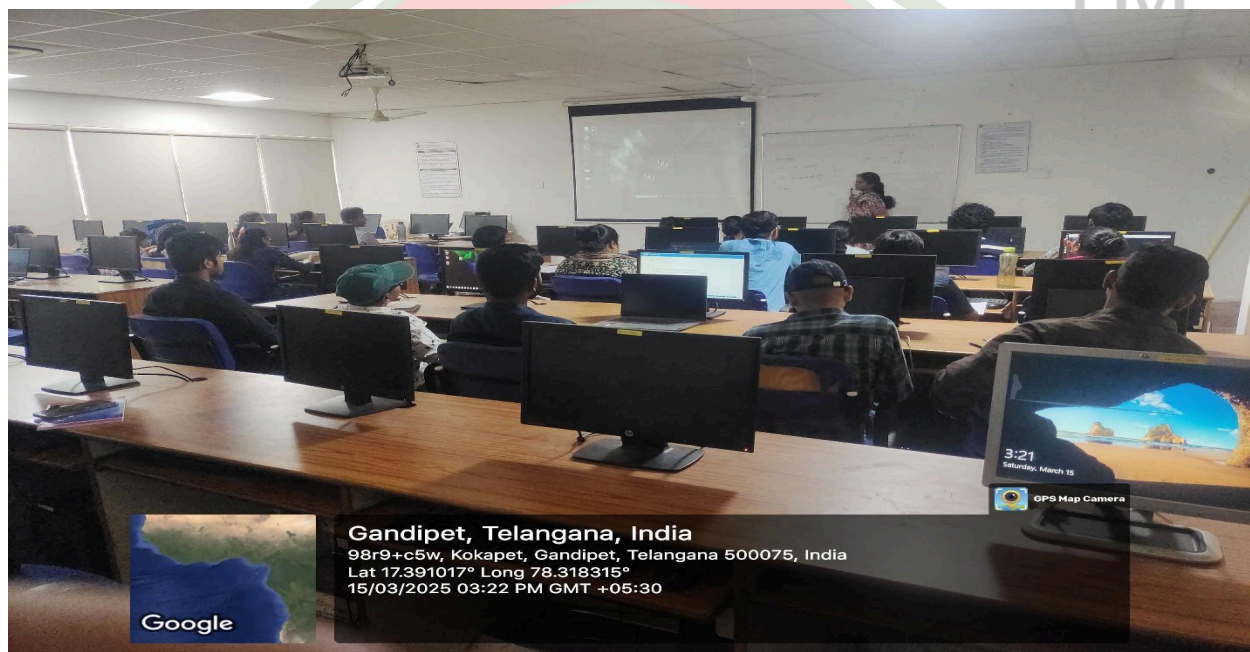


Smt. I. Srujana, Asst. Professor, Dept. of CSE, delivering the session 2 on Day



**Session-3:**

Session 3 conducted from 3:00 PM to 4:30 PM by Smt. E.Swathi, Asst. Professor, CSE Dept. She covered the concept of Inheritance in Object-Oriented Programming, highlighting how child classes can inherit features from parent classes. Single inheritance was explained as inheriting from one superclass, while multilevel inheritance involves a chain of inheritance across multiple levels. The use of the super keyword was discussed, which allows access to the parent class’s methods and constructors.



Smt. E. Swathi, Asst. Professor, Dept. of CSE, delivering the session 3 on Day 1

**Day-2- (22-03-2025)****Session-1 & 2:**

Session 1 conducted from 9:30 AM to 11:00 AM, and Session-2 from 11:15 to 12:45 PM, by Dr. M Venkata Krishna Reddy, Asst. Professor, CSE Dept. He has explained abstract classes as classes that cannot be instantiated and may contain abstract methods without implementation, which must be defined in child classes. He also covered interfaces, which declare method signatures without implementations, allowing multiple classes to implement them and



achieve multiple inheritance in Java and explained the importance of interfaces in the real-world problems.

In the second session, he focused on polymorphism, highlighting its two types: compile-time polymorphism and runtime polymorphism. Method overloading (compile-time polymorphism) allows multiple methods with the same name but different parameters within a class. Method overriding (runtime polymorphism) occurs when a subclass provides a specific implementation of a method already defined in its superclass, enabling dynamic method dispatch at runtime.



Dr. M. Venkata Krishna Reddy, Asst. Professor, Dept. of CSE, delivering the session 1 & 2 on Day 2



Participants attending the session 1 & 2 on Day 2

## Session-3:

Session 3 conducted from 1:15 PM to 2:45 PM by Smt. I. Srujana, Assistant Professor, CSE Department. She has discussed with demo on packages in Java, which help organize classes and interfaces. She covered how to create and import packages for better code modularity. Special focus was given to standard packages like java.lang (which is automatically imported and contains fundamental classes like String and Math) and java.util (which provides utility classes like ArrayList and Scanner), along with other commonly used standard packages.



Smt. I. Srujana, Asst. Professor, Dept. of CSE, delivering the session 3 on Day

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## Session-4:

Session 4 conducted from 3:00 PM to 4:30 PM by Dr. B, Ramana Reddy, Asst. Professor, CSE Dept. His lecture covered Exception Handling in Java, explained how exceptions are used to handle runtime errors gracefully. He highlighted the two types of exceptions: checked exceptions (like IOException), which are checked at compile-time, and unchecked exceptions (like ArithmeticException), which occur at runtime and are not checked during compilation.





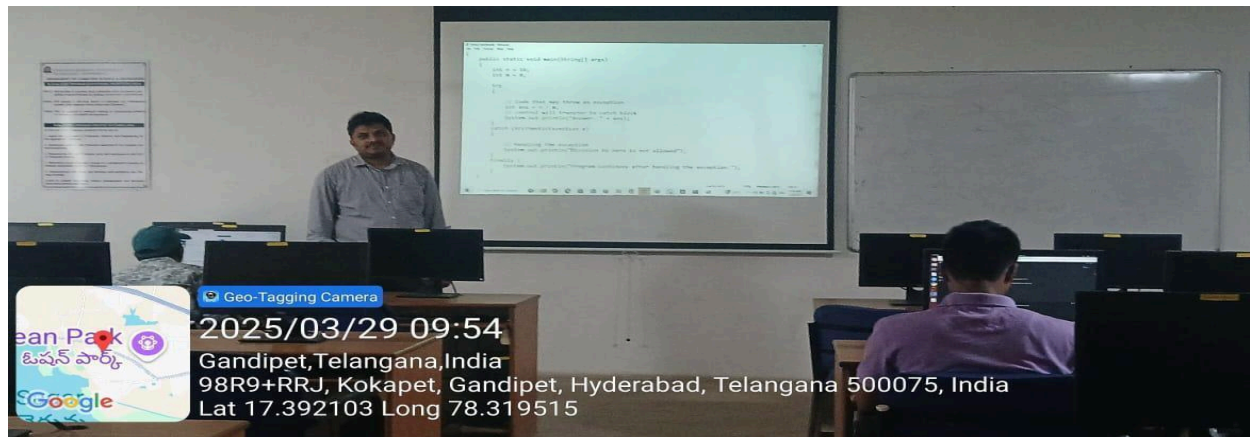
Dr. B. Ramana Reddy, Asst. Professor, Dept. of CSE, delivering the session 4 on  
Day 2

### **Day-3-( 29-03-2025)**

#### Session-1:

Session 1 was taken from 9:30 AM to 11:00 AM by Dr. B, Ramana Reddy, Asst. Professor, CSE Dept. The lecture elaborated on try-catch blocks used to handle exceptions and prevent program crashes, along with the finally clause which executes code regardless of exception occurrence. He also explained how to throw and propagate exceptions using the throw and throws keywords. Additionally, the concept of custom exceptions was discussed, allowing developers to create their own exception classes for specific error handling needs.





Dr. B. Ramana Reddy, Asst. Professor, Dept. of CSE, delivering the session 1 on  
Day 3

#### Session-2:

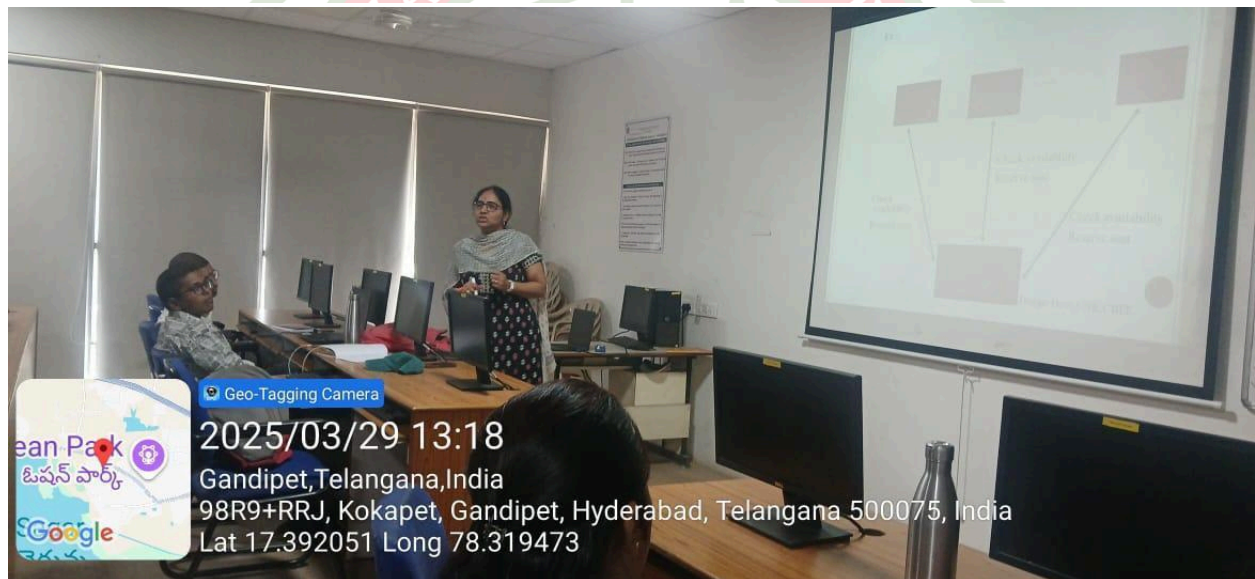
Session 2 conducted from 11:15 to 12:45 PM, by Dr. M Venkata Krishna Reddy, Asst. Professor, CSE Dept. The lecture introduced the concept of Multithreading, which allows multiple threads to run concurrently, improving program efficiency. He distinguished between threads (lightweight sub processes) and processes (independent executing programs). Methods for creating threads were discussed, specifically by extending the Thread class and implementing the Runnable interface.



Dr. M. Venkata Krishna Reddy, Asst. Professor, Dept. of CSE, delivering the  
session 2 on Day 3

## Session-3:

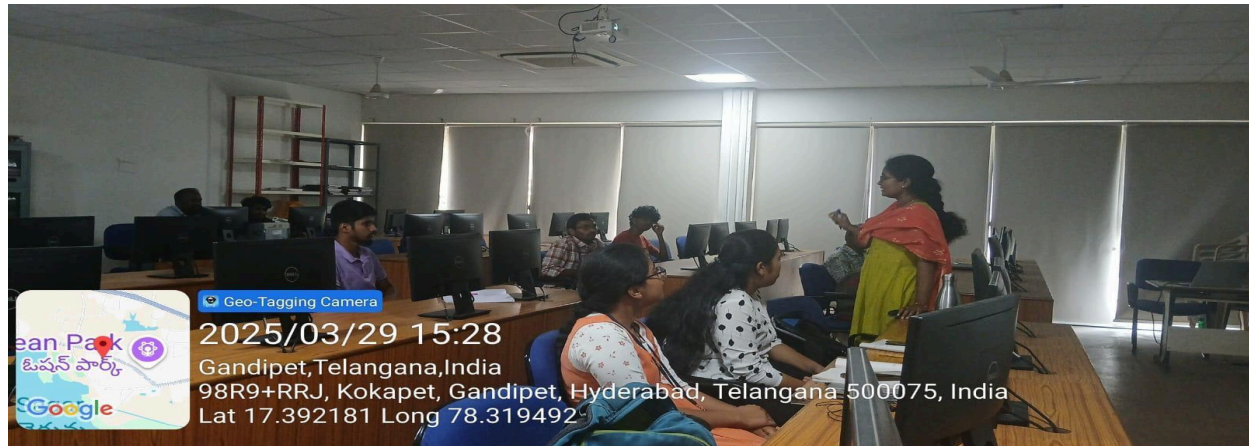
Session 3 conducted from 1:15 PM to 2:45 PM by Smt. S. Durga Devi, Assistant Professor, Department of CSE. The lecture focused on Thread Synchronization, explaining its role in preventing data inconsistency when multiple threads access shared resources. Techniques like the synchronized keyword were discussed. Additionally, Concurrency Utilities from the `java.util.concurrent` package were introduced, providing advanced tools like thread pools, semaphores, and locks to efficiently manage multithreading and synchronization.



Smt. S. Durga Devi, Asst. Professor, Dept. of CSE, delivering the session 3 on  
Day 3

## Session-4:

Session 4 conducted from 3:00 PM to 4:30 PM by Smt. E. Swathi, Asst. Professor, CSE Dept. The lecture introduced the Collections Framework in Java, which provides a unified architecture to store and manipulate groups of objects. It covered key Collection interfaces such as List (ordered collection with duplicates), Set (unordered collection without duplicates), and Map (key-value pair storage). These interfaces simplify data handling and improve code efficiency.

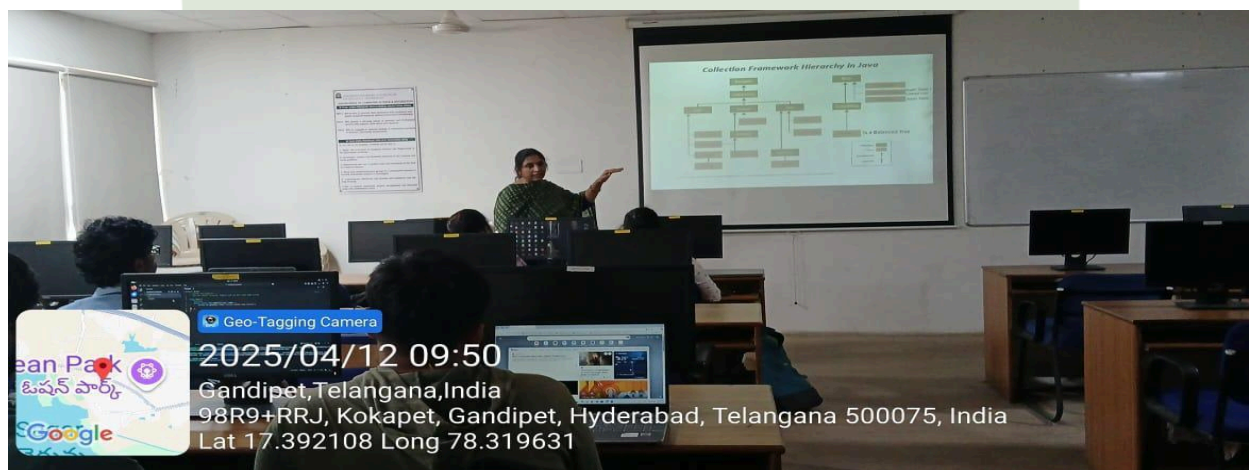


Smt. E. Swathi, Asst. Professor, Dept. of CSE, delivering the session 4 on Day 3

#### Day-4-(12-04-2025)

##### Session-1:

Session 1 conducted from 9:30 AM to 11:00 AM, by Smt. A.Sangeetha, Asst. Professor, CSE Dept. The lecture explained TreeMap and LinkedHashMap, both part of the Java Collections Framework. TreeMap stores key-value pairs in sorted order based on keys, while LinkedHashMap maintains the insertion order of elements. Additionally, the usage of Iterator and ListIterator was discussed for traversing collections, with Iterator allowing forward traversal and ListIterator supporting both forward and backward navigation.

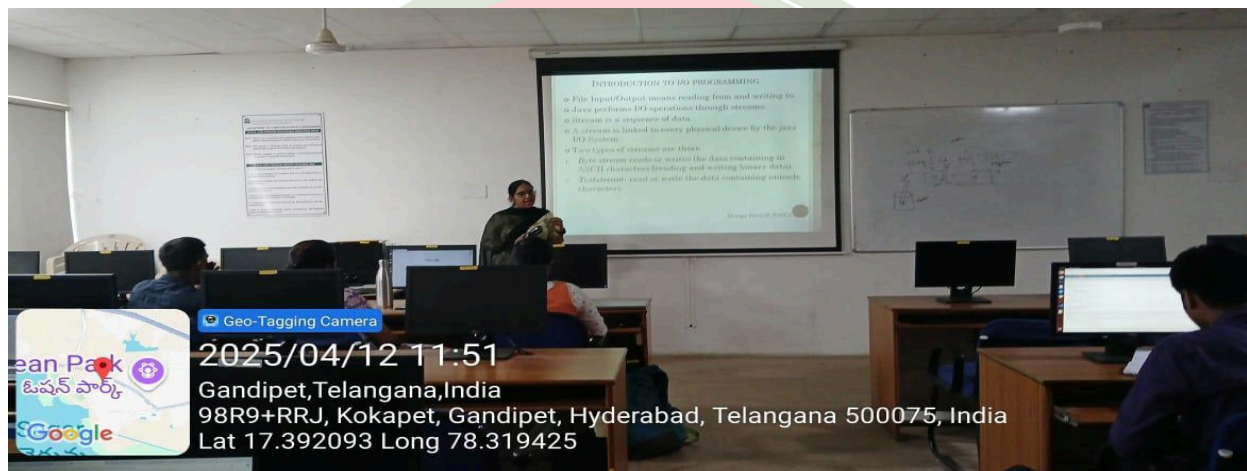


Smt. A. Sangeetha, Asst. Professor, Dept. of CSE, delivering the session 1 on  
Day 4



## Session-2:

Session 2 conducted from 11:15 to 12:45 PM by Smt. S.Durga Devi, Asst. Professor, CSE Dept. The lecture introduced the Basics of File I/O in Java, focusing on reading from and writing to files. She highlighted the use of Buffered Streams like BufferedReader and BufferedWriter, which enhance efficiency by reducing the number of read/write operations through internal buffering, making file handling faster and smoother.



Smt. S. Durga Devi, Asst. Professor, Dept. of CSE, delivering the session  
2 on Day 4

## Session-3:

INSTITUTE OF TECHNOLOGY

Session 3 conducted from 1:15 PM to 2:45 PM by Prof. R Ravinder Reddy, Professor, CSE Dept. The lecture discussed important classes of the Java Collections Framework. ArrayList and LinkedList are used for ordered lists, where ArrayList provides fast random access and LinkedList allows quick insertions/deletions. HashSet and TreeSet are used to store unique elements, with HashSet offering fast, unordered storage and TreeSet maintaining sorted order. HashMap was introduced for storing key-value pairs, allowing efficient data retrieval based on keys.

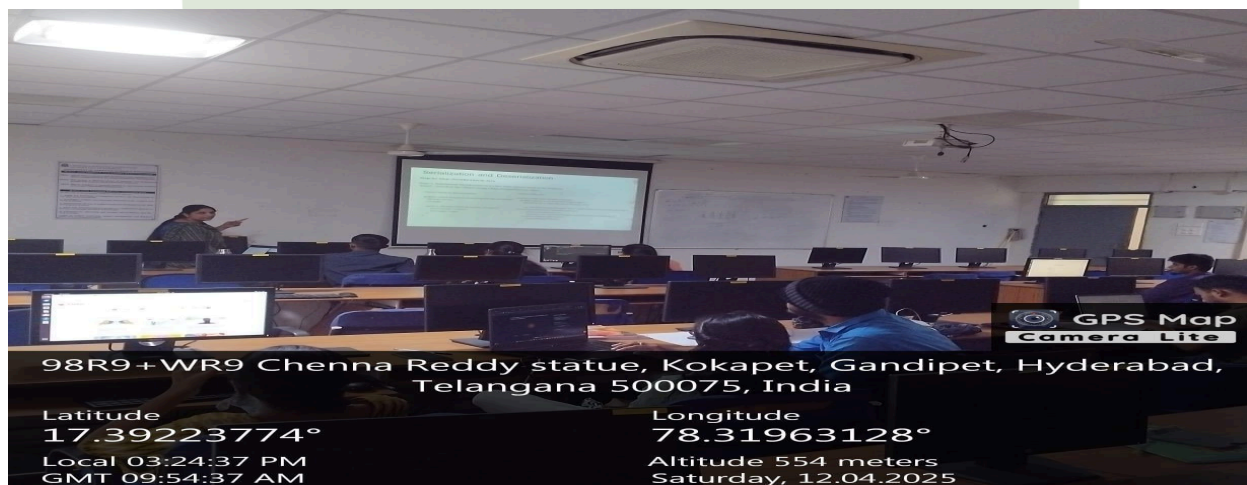


Prof. R. Ravinder Redy, Professor, Dept. of CSE, delivering the session 3 on Day

4

Session-4:

Session 4 conducted from 3:00 PM to 4:30 PM by Smt. A.Sangeetha, Asst. Professor, CSE Dept. The lecture explained Serialization, the process of converting an object into a byte stream for storage or transmission. She also covered Deserialization, which reconstructs the object from the byte stream. These concepts are essential for saving object states and transferring objects over networks in Java.

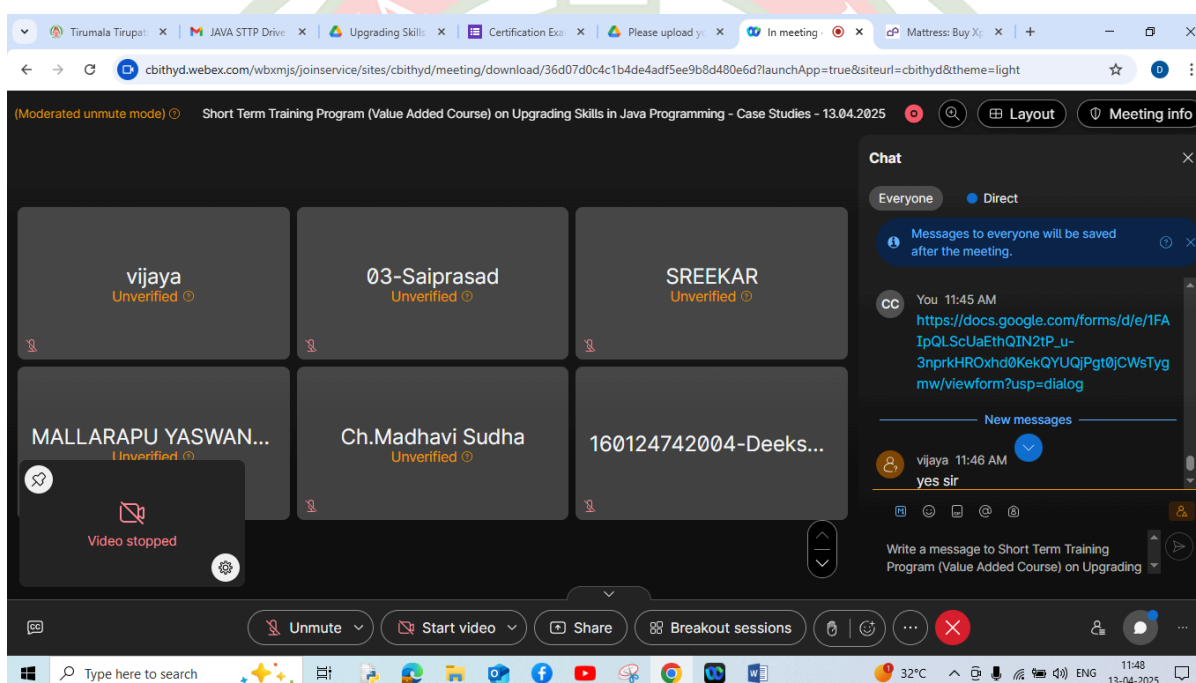


Smt. A. Sangeetha, Asst. Professor, Dept. of CSE, delivering the session 4 on  
Day 4

### Day-5-(13-04-2025) (Online)

Session-1 & 2:

Session 1 & 2 conducted from 9:30 AM to 11:00 AM by Dr. M. Venkata Krishna Reddy, Asst. Professor, CSE Dept. through online mode using webex platform. Case Studies on Inheritance and Exceptional Handling were given. Participants were asked to complete the task and upload the same in the drive provided.

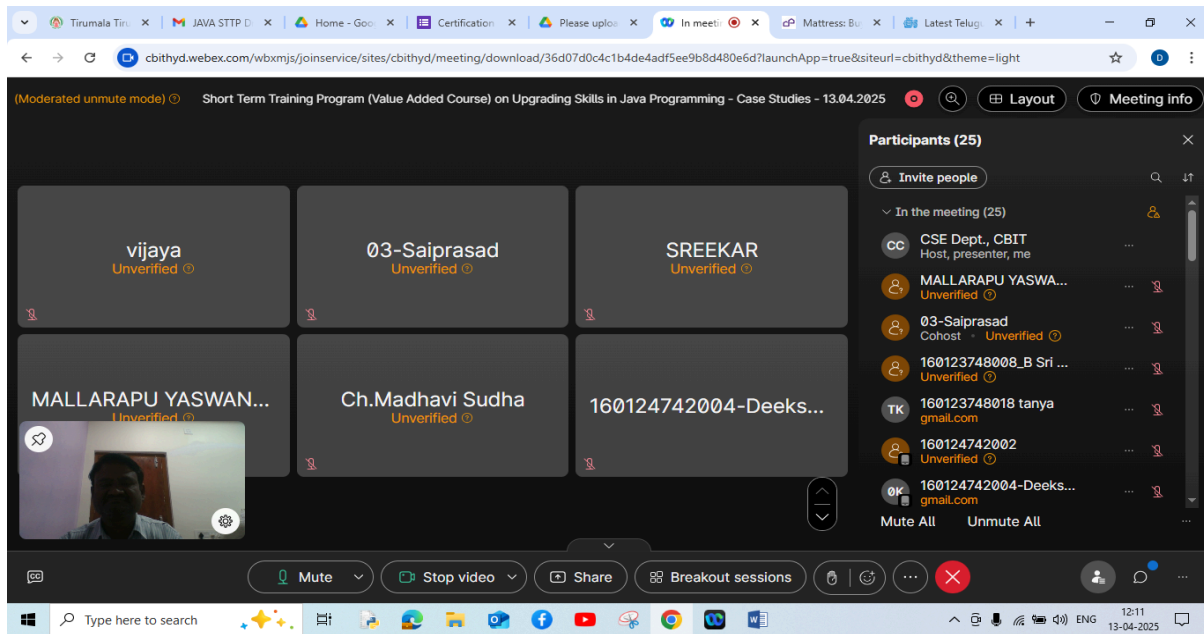


Online session 1 & 2 - Drive provided to upload the case studies

Session-3 & 4:

Session 3 & 4 conducted from 11:00 AM to 12:30 PM by Dr. M. Venkata Krishna Reddy, Asst. Professor, CSE Dept. through online mode using webex platform. Case Studies on Multiple Threading and Collections were given. Participants were asked to complete the task and upload the same in the drive provided. Examination is conducted by providing the google form to all the participants at the end of the session 4 on the final day of STTP.

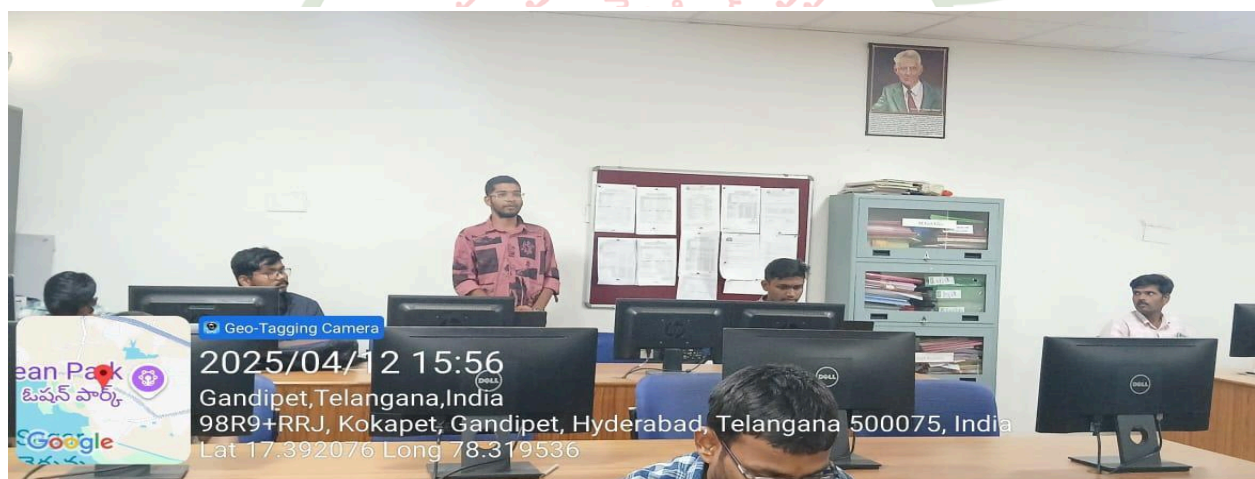




Online session 3 & 4 - Case studies& Examination conducted for the participants

### Valedictory Session:

Feedback was collected through the google form from the participants during the valedictory session. Participants expressed their experience during the STTP and provided valuable insights to be carried further. Dr. M. Venkata Krishna Reddy proposed the vote of thanks. The valedictory session was concluded with a photo snap of all the participants, resource persons, and the coordinating team.



Participants giving the feedback on the occasion of valedictory  
Department of Computer Science and Engineering



Snapshot on the occasion of valedictory

### Objectives of the Workshop:

- Enable students and faculty to enhance their understanding of programming concepts and their ability to apply them using the Java programming language.
- Enable the students to compete in the Placements confidently.
- Enable students to code their projects in an object-oriented approach.

### Enclosed:

- Event Flyer & Schedule
- Attendance Forms
- Feedback Form & Responses
- Certification Exam Form
- Profile of Resource Persons
- Approval Letter
- Sample certificates

**Dr. M. Venkata Krishna Reddy**

Asst. Professor & Faculty Coordinator,  
Dept. of CSE

**Ms. I. Srujana**

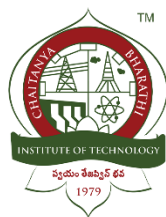
Asst. Professor & Faculty Coordinator,  
Dept. of CSE

**Ms. Ch. Madhavi Sudha**

Asst. Professor & Faculty Coordinator,  
Dept. of CSE

**Ms. A.Sangeetha**

Asst. Professor & Faculty Coordinator,  
Dept. of CSE



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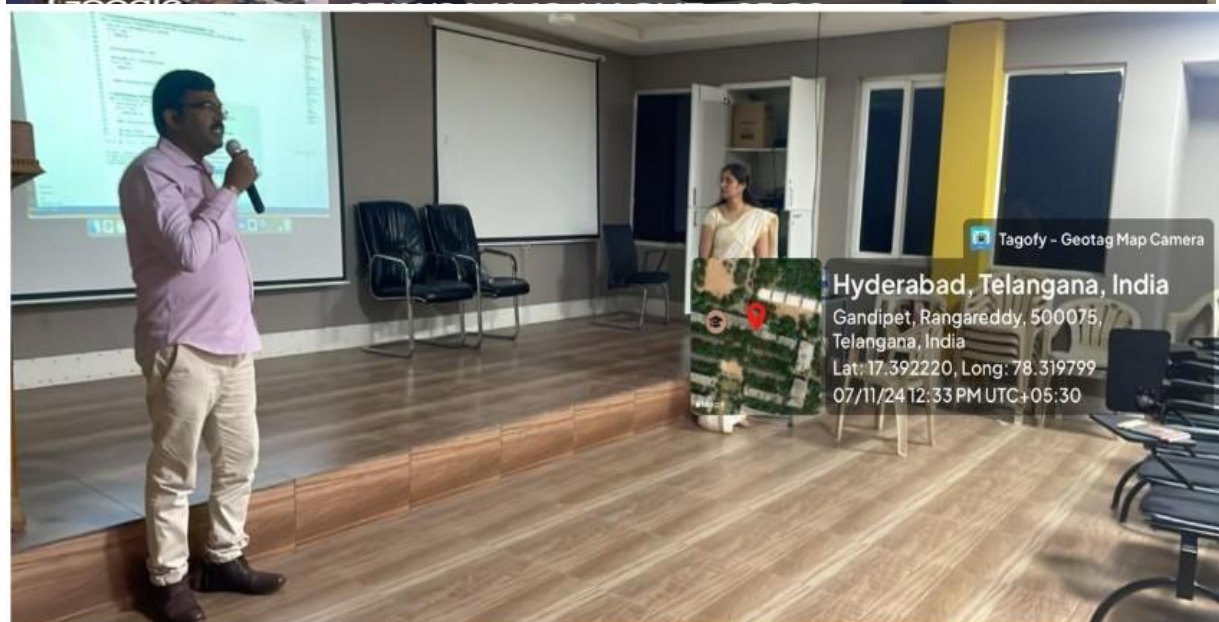
NOV 2024

- **Expert Talk on “Expert Talk on “Technology & AI Revolution” and “Blockchain Technology”** during the 6<sup>th</sup> and 7<sup>th</sup> of November in CSE Seminar Hall C203. The Resource persons are Ms. Subhashini Puram and Mr.Venkata Ramana Reddy Parine Principal Member and Member, Technical Staff, Sales Force, Hyderabad. The sessions are meant for VII.V, PG students, and the Faculty of CSE. The session was scheduled from 11.00 AM to 12.30 PM. The total number of participants is around 260 from both VII and V SEM and the faculty coordinators are Dr. R. Ravinder Reddy, Professor, Dr. E.Padmalaatha, Assoc. Professor, and Dr. M Venkata Krishna Reddy, Assistant Professor from the Department of Computer Science and Engineering.



Dr. M.Venkata Krishna Reddy, Assistant Professor, Dept. of CSE and Faculty  
Coordinator hosting the event





Dr. R. Ravinder Reddy Proposing vote of thanks

**OCT 2024**

➤ **Expert Talk on “Preparing for the Corporate World and Paving your Career Path”**  
– **October 23rd , 2024**

The Department of Computer Science and Engineering at Chaitanya Bharathi Institute of Technology, Hyderabad has conducted an Expert Talk on ” Preparing for the Corporate World and Paving your Career Path” on October 23rd, 2024, in offline mode, CSE Seminar Hall C203. The Faculty Coordinators for the Event Talk is Dr. R. Ravinder Reddy, Professor and Dr. E. Padmalatha, Associate Professor, Dr. M. Venkata Krishna Reddy, Assistant Professor, Department of CSE. The Resource Person for the workshop was Ms. Subhashini Puram, Principal Member, Technical Staff, Salesforce, Hyderabad, The session was scheduled from 11.00 AM to 12.30 PM. This talk is open to all III Sem CSE students and faculty. The number of participants who attended is 163. A brief introduction of the Resource Person was given by Dr. M. Venkata Krishna Reddy, faculty coordinator. The technical support was given by Mr. J. Rajesh Programmer of Department of Computer Science and Engineering, Feedback was collected at the end of the expert talk from the participants Dr. R. Ravinder Reddy proposed vote of thanks. Ms. Subhashini Puram, the speaker, stated the session by introducing the examples of building a good resume and delegated its importance. Topics covered in the session are preparing for corporate world, companies' expectations from the aspirants, latest technologies, importance of hackthons, etc. She has given three problem statements to the participants to solve. The resource persons delivered the concepts and demonstrated with real time examples and experiences.

**Objectives of the Workshop:**

To create awareness on corporate world.  
To provide insight into the career development.  
To acquaint the participants with necessary motivation for paving their career path



Dr. M. Venkata Krishna Reddy, Assistant Professor, Dept. of CSE and Faculty Coordinator





Resource Person Ms. Subhashini Puram delivering the talk



Participants during the session



Participants along with Speaker Ms. Subhashini Puram



SEP 2024

➤ A Workshop on “Real Time Business Processing using IKU” Sep 30th, 2024

The Department of Computer Science and Engineering at Chaitanya Bharathi Institute of Technology, Hyderabad has conducted a Workshop on “Real Time Business Processing using IKU” in online mode on 30th September, 2024. The Faculty Coordinators for the workshop is Dr. S. China Ramu, Professor, Dr. M. Swamy Das, Professor, Dr. R. Ravinder Reddy, Professor and Co-coordinators are Dr. K. Morarjee, Associate Professor, Dr. G. Vanitha, Associate Professor and Smt. T. Suvarna Kumari, Assistant Professor from Department of Computer Science and Engineering. The sessions were scheduled from 2.00 PM to 4.00 PM. The Resource person for the workshop is Dr. N. Vijay Kumar, Senior consultant, Deloitte. This program is open to all B.E(CSE) students. The no. of participants who attended is 149. Inaugural of the workshop was hosted by Dr. K. Morarjee, faculty co-coordinator. Sir has given the opening remarks and also emphasized the importance, objectives and goals of Realtime business data processing using IKU in current corporate world. A brief introduction was given about Resource Person Dr. N. Vijay Kumar. The technical support was provided by Mr. Koti Babu and Mr. P. Ramesh Babu, programmers of Department of Computer Science and Engineering for the workshop in streaming and certificate generation. Feedback was collected at the end of the workshop from the participants. Dr. N. Vijay Kumar, the resource person for the session shown the participants installation of IKU software and demonstrated, how to create own template using IKU for real-time business data processing. IKU is a software system for real-time business data processing. The resource persons delivered the concepts behind the program and demonstrated with examples. He conducted hands on session that enabled participants to understand the concepts clearly.

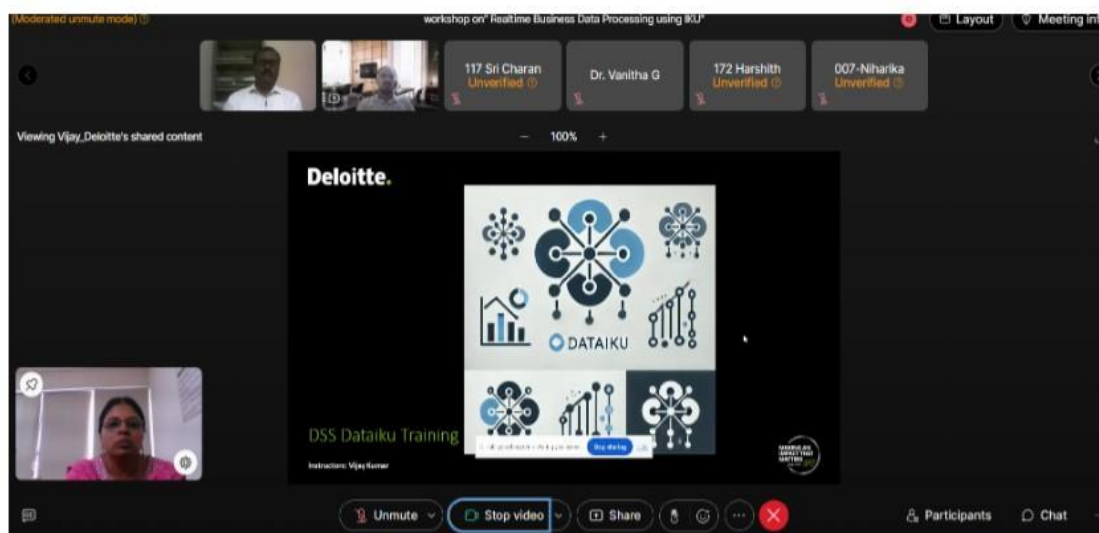
**Objectives of the Workshop:**

To create awareness on Data IKU  
To provide instructor-led hands on live approach on writing skills.  
To acquaint the participants with real-time business data processing.  
The online links for Webex and Feedback and are as follows:

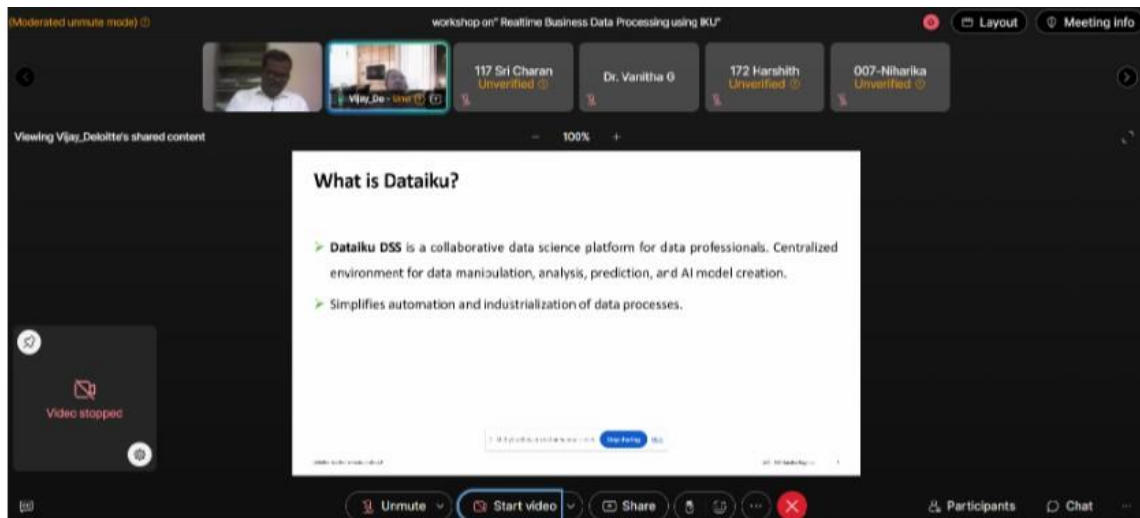
**Webex Link :**

<https://cbithyd.webex.com/cbithyd/j.php?MTID=m5402262fc212f6a1691ba0ec8e5897c3>

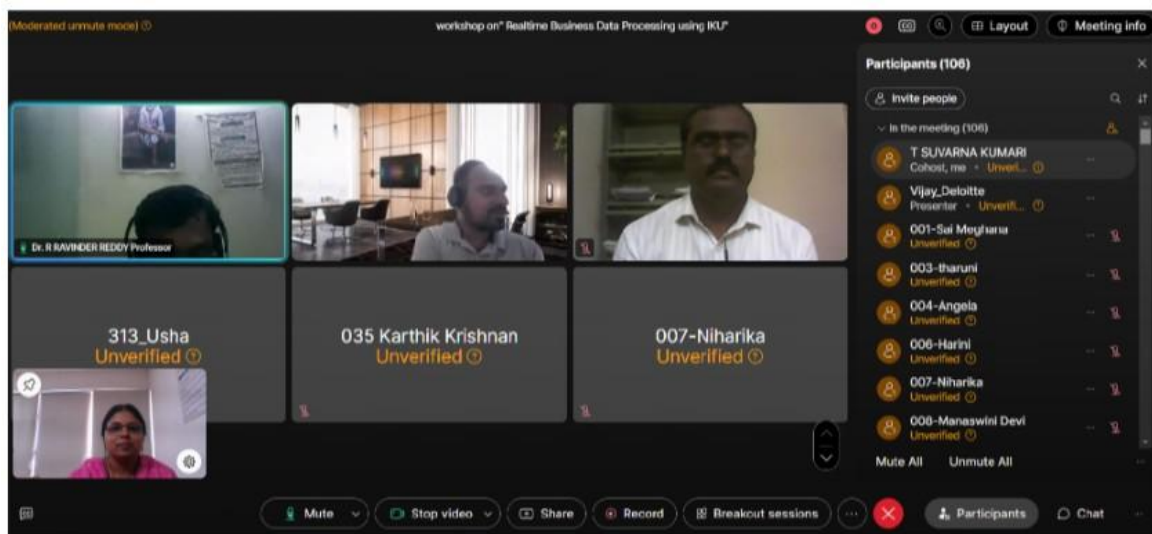
Feedback Link– <https://forms.gle/qyPXbZBubgYUtxkLA>



Dr. K. Morarjee, Associate Professor, Dept of CSE and Faculty Co-Coordinator hosting the event



Dr. N Vijay Kumar, Resource Person, demonstrating the concepts of Data IKU



## Feedback and Validatory

JUNE 2024

### ➤ One Week National Level Faculty Development Programme on “Quantum Computing: Building a Rapid and Secure Information Tomorrow” June 11th to 15th, 2024

The department of Computer Science and Engineering at Chaitanya Bharathi Institute of Technology, Hyderabad has conducted a One Week National Level Faculty Development Programme on “Quantum Computing: Building a Rapid and Secure Information Tomorrow” from June 11th to 15th, 2024. The convenor for the FDP Prof. D. Raman, HoD, Coordinator for the FDP is Dr. V. Padmavathi Associate Professor, Department of CSE. Co-Coordinator for the FDP is Dr. Uma Maheswari V., Associate Professor, Dr. Ravi Uyyala, Associate Professor, Smt. G. Shanmukhi Rama, Assistant Professor and Organizing Committee for the FDP is Smt. Ch. Madhavi Sudha, Assistant Professor, Sri. A. Mohan, Assistant Professor, Sri. M. Venkata Krishna Reddy, Assistant Professor, Smt. M. Naga Jyothi, Programmer, Sri. B. Sangeev Kumar, Programmer, Sri. P. Ramesh Babu, Programmer.

#### Resource Persons for the FDP:

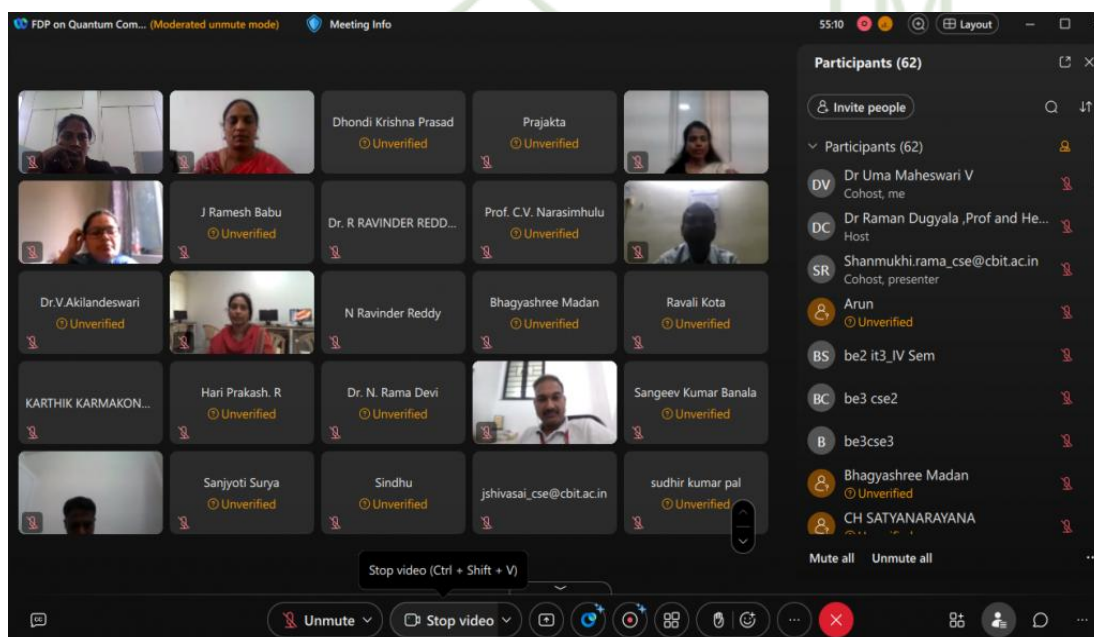
- Dr. Prem Laxman Das, Society for Electronic Transactions and Security (SETS), Chennai
- Dr. Kannan Srinathan Center for Security, Theory and Algorithmic Research (CSTAR), IIIT Hyd
- Venkat Raman B., RGUKT (IIIT), Basar
- Chiranjeevi V., CSTAR, IIIT Hyderabad.
- S. Shodasakshari Vidya, CSTAR, IIIT Hyderabad
- Dr. V. Padmavathi, CBIT, Hyderabad

## Day 1: FN Session

The FDP has paved the way for the Faculty, Research Scholars, Students, and Industry Professionals in the Quantum Computing. The Inaugural session started with the welcome address by Smt. Shanmukhi Rama, Co-Coordinator of the FDP. The session was graced by the Principal, Prof. C. V. Narasimhulu, the key note speaker Dr. Prem Laxman Das and Prof. D. Raman, Head of the Department, CSE. Dr. V. Padmavathi, Co-Ordinator of the FDP briefed about the details of the FDP.

Dr. V. Padmavathi, Associate Professor, Dept. of CSE, CBIT has started the session with Fundamentals of Quantum Computing of Quantum Computing, principles of Quantum Mechanics. Later, Dr. Padmavathi has carried on with elucidating the probability of photon received when prepared in same or different basis. Followed by concepts like Quantum Cryptography, Quantum Key Distribution (QKD) and also explained different QKD protocols. Participants were very interactive with resource person in Q & A session.

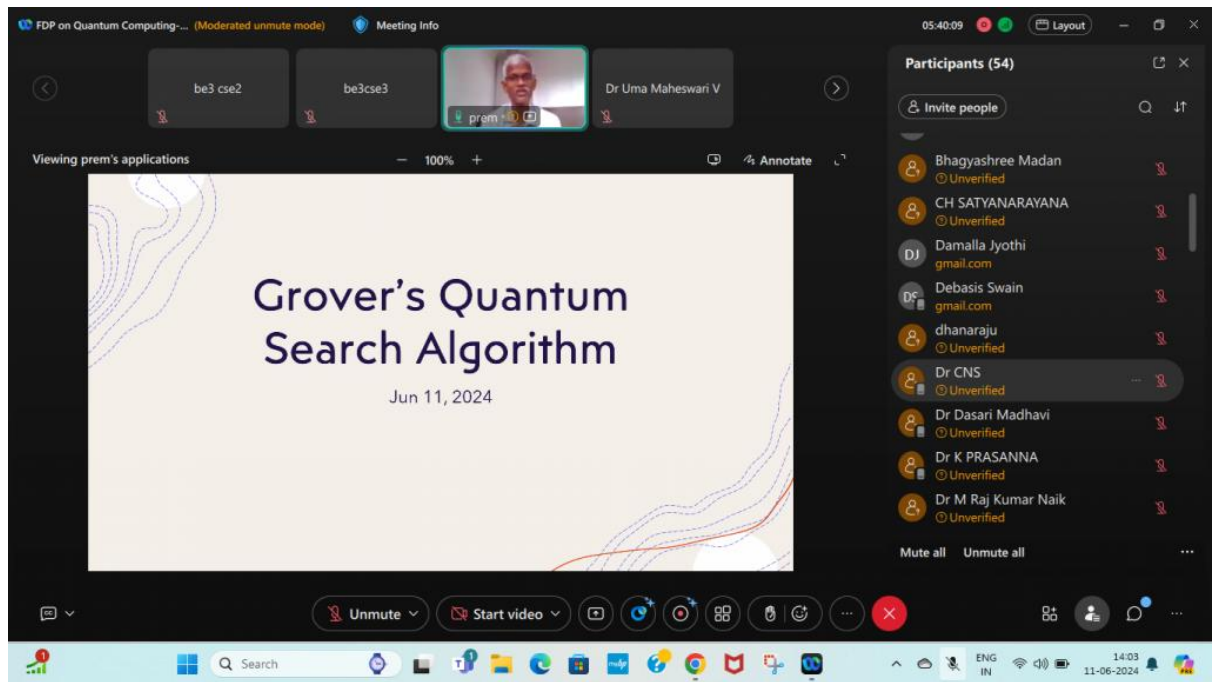
The session was concluded with proposing vote of thanks by Smt. Shanmukhi Rama and feedback from participants.



## Day 1: AN Session

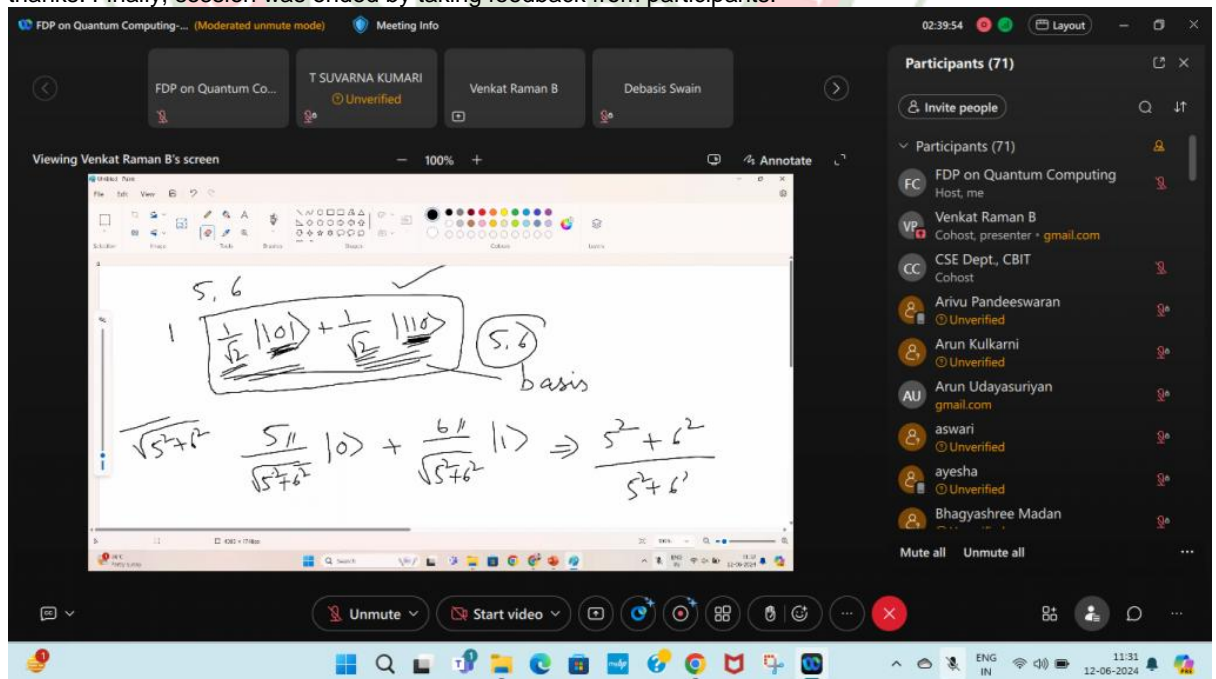
The afternoon session of Day 1 was on Grover's Search algorithm by Dr. Prem Laxman Das. A detailed illustration of the algorithm and its complexity were discussed in the session. And then resource person has addressed all the questions imposed by participants. The session was concluded with proposing vote of thanks by Dr. Uma Maheswari V and feedback from participants.





## Day 2: FN Session

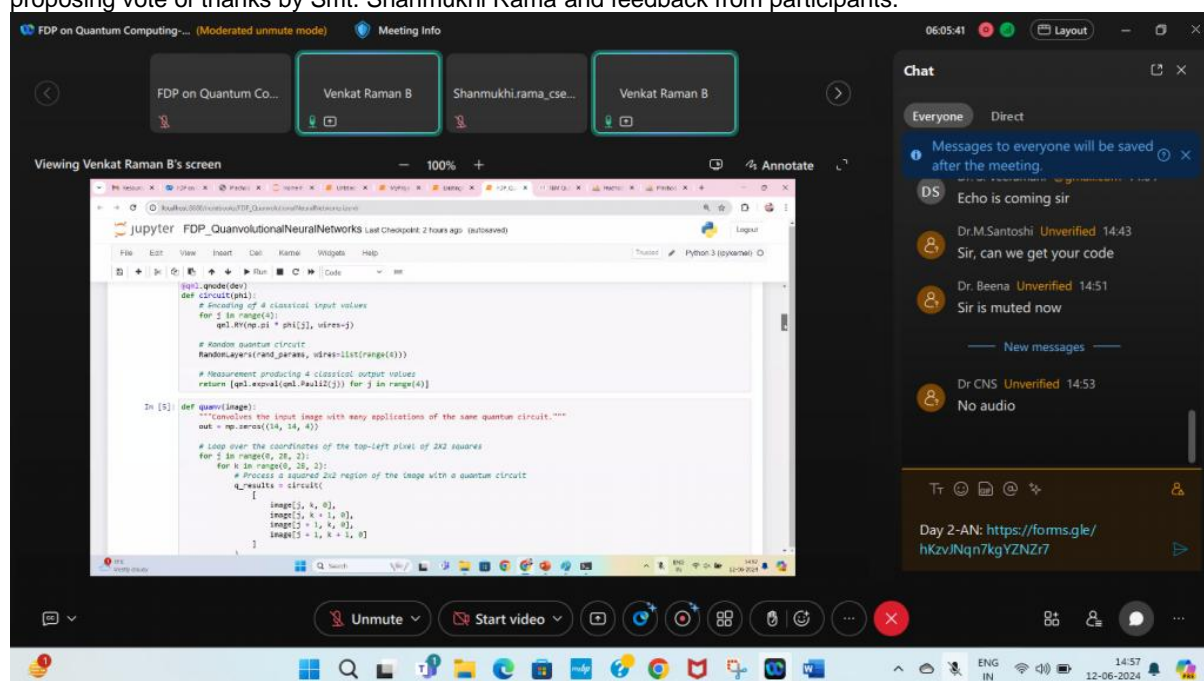
Second day participants were very enthusiastic to know about Quantum Machine Learning (QML) for Image Classification. Venkat Raman B has started the session with pictorial representation of qubits, Bloch sphere representation, double slit experiment. The quadrant of QML, data and amplitude embedding were explicated by the resource person. And then resource person has addressed all the questions imposed by participants. At the end, Dr. V. Padmavathi, took the privilege to propose vote of thanks. Finally, session was ended by taking feedback from participants.



## Day 2: AN Session

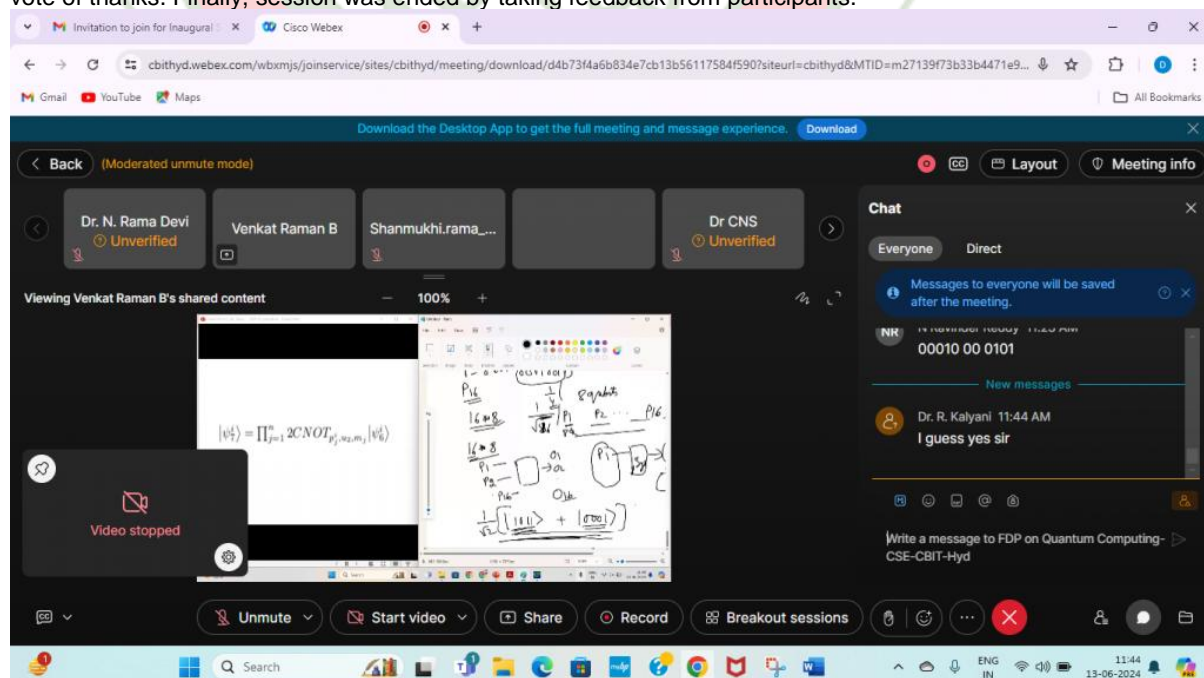
The afternoon session was continued by Venkat Raman B on Implementation of QML using IBM's Qiskit framework. The concept of Quantum Neural Network was made known to all the participants. The programming for quantum circuit construction using Qiskit framework was shown. The interaction between

speaker and the participants continued throughout the session. The session was concluded with proposing vote of thanks by Smt. Shanmukhi Rama and feedback from participants.



### Day 3: FN Session

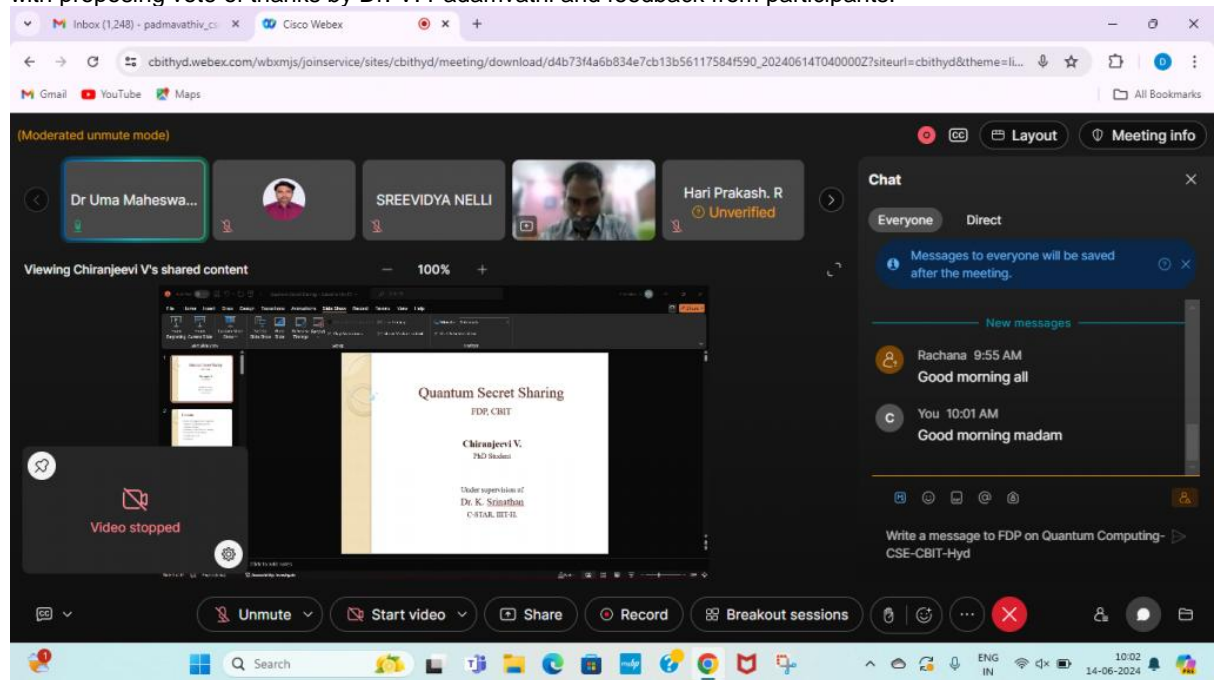
On third day the session was conducted by Venkat Raman .B on Quantum Memory. The concept was explained with a research article titled Parametric Probabilistic Quantum Memory. The participants have shown their enthusiasm in Q & A session. At the end, Smt. Shanmukhi Rama, took the privilege to propose vote of thanks. Finally, session was ended by taking feedback from participants.



### Day 3: AN Session

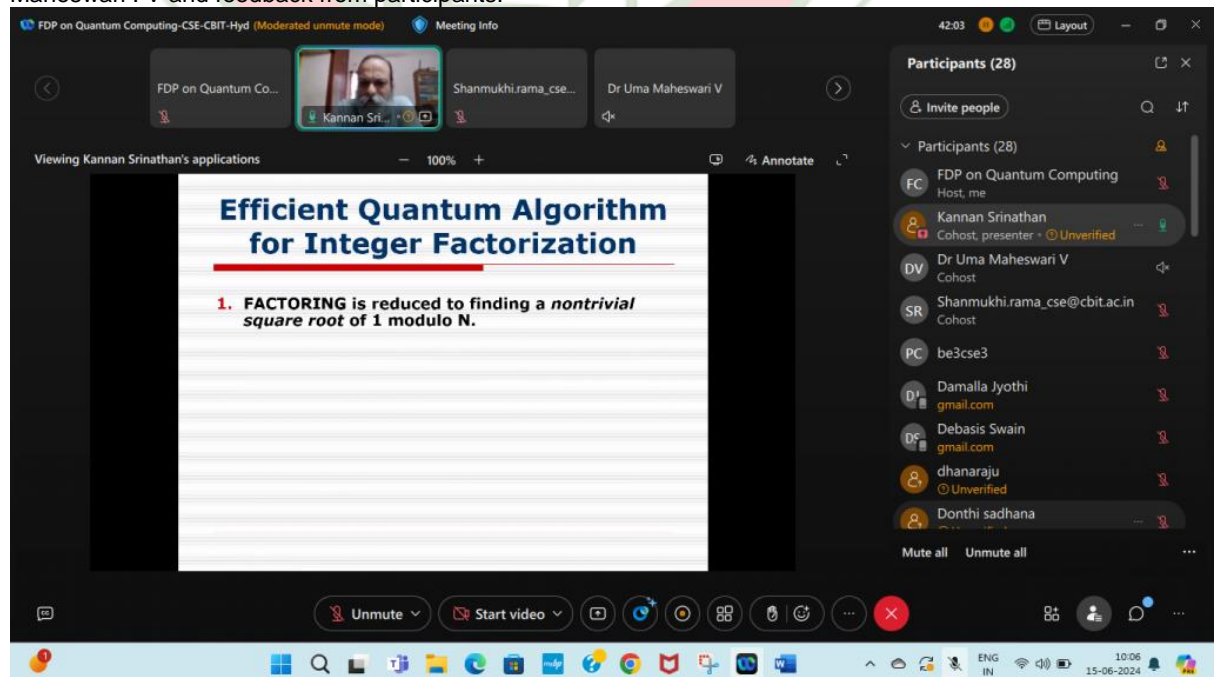
The AN session was carried forward by Venkat Raman B. on Pattern Classification using Quantum Hopfield Network. The session started with the explanation of neuron connection. Later, the concepts like

density matrix, pattern classification, quantum numerical example were discussed. The session was carried out with speaker and participants solving the example simultaneously. The session was concluded with proposing vote of thanks by Dr. V. Padamvathi and feedback from participants.



#### Day 4:

The session on Quantum Secret Sharing (QSS) was delivered by Chiranjeevi V on fourth day. As part of this, problem statement, background of classical secret sharing were discussed. Also, the detailed description about QSS, revocation concept were presented. Also, explained the cryptographic properties implemented by these methods. The session was concluded with proposing vote of thanks by Dr. Uma Maheswari . V and feedback from participants.

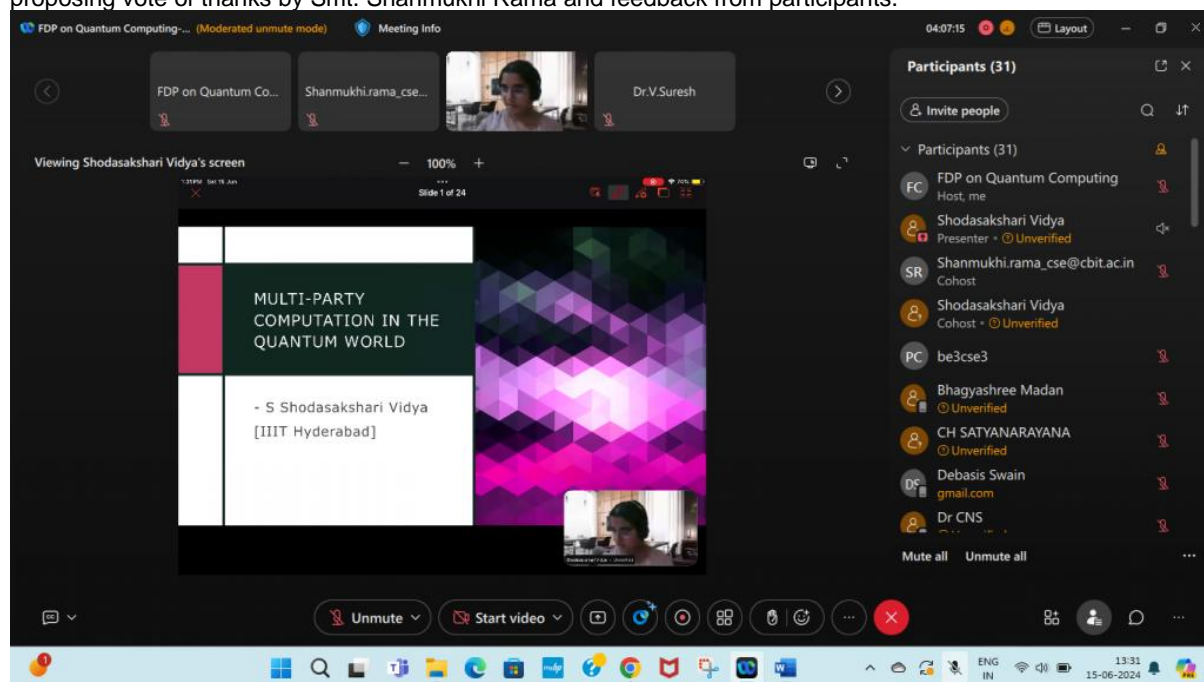


#### Day 5: FN Session

On last day of FDP the fore session was conducted by Dr. Kannan Srinathan on How to Break RSA. The resource person started the session with the discussion on quantum mechanics, postulates. Then



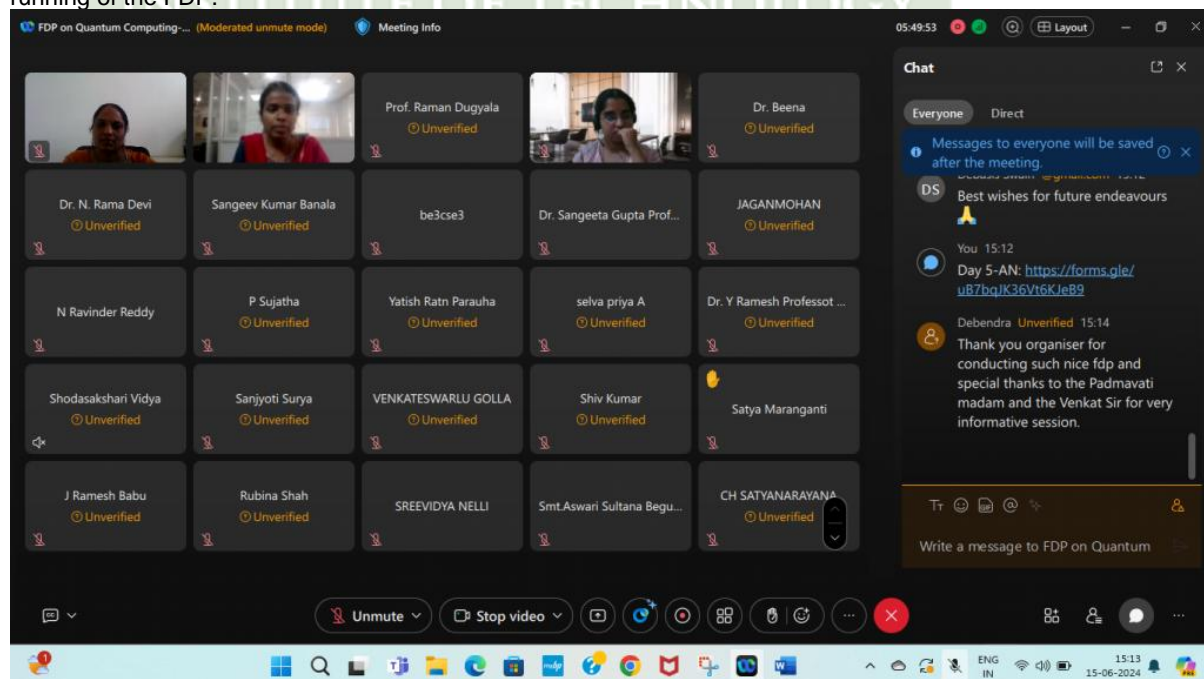
explained in detail about four steps of Shor's algorithm, Techniques of Quantum Fast Fourier Transform. Participants were very interactive with resource person in Q & A session. The session was concluded with proposing vote of thanks by Smt. Shanmukhi Rama and feedback from participants.



## Day 5: AN Session

The afternoon session was conducted by S. Shodasakshari Vidya on Quantum Multi Party Computation (Quantum MPC). The resource person started the session with the discussion on problem statement. Then explained in detail how classical protocols secure against quantum adversaries, better quantum protocols for MPC. Then highlighted on Oblivious transfer, Bit commitment. The interaction between speaker and the participants continued throughout the session. The session was concluded with proposing vote of thanks by Smt. Shanmukhi Rama and feedback from participants.

The One-Week National Level FDP was concluded with Valedictory ceremony. Participants have enthusiastically provided positive and encouraging comments for the the Coordinators, the Co- Coordinators, the Organizing Committee, Department of CSE, Principal, Management, and the smooth running of the FDP.



Press Report:

# CBIT Hosts 1 Week National Level Faculty Development Program on Quantum Computing

DECCAN NEWS SERVICE  
HYDERABAD

The Chaitanya Bharathi Institute of Technology (CBIT) successfully conducted a groundbreaking one Week National Level Online Faculty Development Program (FDP) on "Quantum Computing: Building a Rapid and Secure Information Tomorrow" organized by the Department of Computer Science and Engineering from June 11th to June 15th, 2024. This intensive program aimed to equip faculty members with cutting-edge knowledge and practical skills in the rapidly evolving field of quantum computing.

The event saw 125 participants, Faculty, Students, Research scholars from various states including Mohali, Punjab,



jab, Tumakur, Karnataka, Vijayawada, Jamshedpur, Jharkhand, Mumbai Auragabad have actively participated in the FDP. The FDP covered both basic and advanced Quantum computing concepts like Quantum Key Distribution, Grover's Search Algo-

rithm, Quantum Machine Learning (QML) for Image Classification, Implementation of QML using IBM's Qiskit framework, Quantum Memory, Pattern Classification using Quantum Hopfield Network, Quantum Secret Sharing, Quantum Multi Party

Computation, How to Break RSA using Shor's algorithm, featuring a interactive participants. Prominent speakers from IIIT Hyderabad, IIIT Basar, SETS Chennai, CBIT have shared their expertise and offered their knowledge and perspectives.

## ➤ One Week National Level Faculty Development Programme on "Machine Learning Applications for Engineers" June 3rd to 7th, 2024

The Department of Computer Science and Engineering at Chaitanya Bharathi Institute of Technology, Hyderabad has conducted a One Week National Level Faculty Development Programme on "Machine Learning Applications for Engineers" from June 3rd to 7th, 2024. The Faculty Coordinators for the FDP is Prof R. Ravinder Reddy, Professor and Dr. T. Sridevi, Associate Professor, Department of CSE. Co- Coordinators for the FDP is Smt. Ch.Vijaya Lakshmi, Smt A.Sangeeta, Sri. J.Shiva Sai, Assistant Professors and Organizing Committee for the FDP is Smt. E. Swathi, Smt Isha Padhy, Smt B. Deepthi, Sri. K. Karthik, Assistant Professors, Smt. M. Naga Jyothi, Programmer, Sri. B. Sangeev Kumar, Programmer, Sri. P. Ramesh Babu, Programmer.

### Resource Persons for the FDP:

Dr. Damodar Reddy Edla, NIT, Gao.  
Dr. Ramalinga Swamy Cheruku, NIT, Warangal  
Dr. R. Ravinder Reddy, CBIT, Hyderabad.  
Dr. Dharavath Ramesh, IIT, Dhanbad.  
Sushma Iliger, NIT, Gao.  
Soniya, NIT, Goa.  
Dr. Vinay Raj, NIT, Trichy.  
Dr. Sangram Ray, NIT, Sikkim.  
Vaishali Shirodkar, NIT, Goa.  
Dr. C. Vinaya, Ph.D., ASU, USA(CBIT Alumni)  
Dr. M. Swamy Das, CBIT, Hyderabad.  
Dr. T. Sridevi, CBIT, Hyderabad.  
Smt. I. Srujana, CBIT, Hyderabad.



Activities

Image Viewer

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Website-FDP-Banner-MLAE-CSE-CBIT-1536x642.png

jayababu

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

IN TECHNICAL ASSOCIATION WITH


ACM HYDERABAD DECCAN CHAPTER

ORGANIZING


A One Week National Level Faculty Development Programme in

MACHINE LEARNING APPLICATIONS FOR ENGINEERS


RESOURCE PERSONS




Dr. Damodar Reddy Edla  
NIT, Goa




Dr. Dhoravath Ramesh  
BIT, Dhanbadh




Dr. Ramalinga Swamy  
NIT, Warangal




Dr. Vinay Raj  
NIT Trichy




Dr. Sangram Ray  
NIT, Sikkim




Dr. Vinaya. C  
Tempe, Arizona, United States  
(CBIT Alumna)




Prof. M. Swamy Das  
CBIT



Prof. R. Ravinder Reddy  
CBIT



Dr. Sridevi Tumula  
CBIT



Smt. I. Sujana  
CBIT

Registration Link:  
<https://forms.gle/wQacV5nMGJWmx8q9>  
For more details visit : [www.cbit.ac.in](http://www.cbit.ac.in)

From 3<sup>rd</sup> to 7<sup>th</sup> June, 2024

Online Mode


Intended Participants  
Faculty, Research Scholars,  
PG Students, and Industry Professionals.

One Week National Le... (Moderated unmute mode)


Meeting Info

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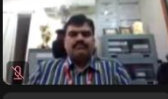
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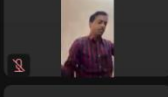
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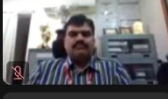
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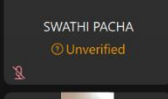
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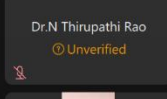
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mprashanth  
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Sajja Srilavanya



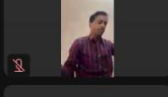
CSE Dept., CBIT



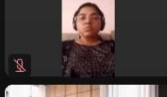
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Latha Tamilselvan  
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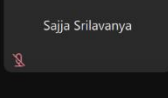
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Alapati Rama Devi



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Syed Shujauddin Sameer



Meenaxi Raikar



# CBIT Hosts Faculty Development Program on Machine Learning



DECCAN NEWS SERVICE

■ HYDERABAD

The Department of Computer Science and Engineering at Chaitanya Bharathi Institute of Technology, in association with ACM Hyderabad Deccan Chapter, organized a Faculty Development Program (FDP) on "Machine Learning Applications for Engineers" from June 3-7, 2024. The event saw 160 participants from various states including Dehradun, Chennai, Bhubaneswar, Mum-

bai, Vijayawada, Hyderabad, Guntur, Kurnool, Warangal, Kakinada, and Mysore. The FDP covered both basic and advanced ML concepts, with sessions on security, NLP, Computer Vision, Software Engineering, Edge Computing, and real-time applications, featuring a mix of 60% theory and 40% hands-on training. Eminent speakers provided valuable insights, fostering research and knowledge among participants.

APRIL –MAY 2024

➤ **WORKSHOP/BOOT CAMP ON “UNSTRUCTURED DBS WITH WEB DEVELOPMENT”**

The Department of Computer Science and Engineering organized a Hybrid Mode Workshop/Boot Camp on “Unstructured DBs with Web Development” from April 20th to May 18th (Every Saturday). The sessions were scheduled from 9.30 AM to 12.30 PM in the Forenoon and 1.00 PM to 4.00 PM. The resource person for the workshop/Boot Camp is Mr. Ravikanth Varigonda, Founder and CEO of Purplenow Technologies, Private Limited. Hyderabad. He Has 20 years of development experience in Embedded, Mobile, and Cloud using Microsoft & Open Source.

This program is for IV Semester CSE and all allied branch students. 180 students participated in the Boot Camp. The number of students/participants who attended is 180. Inaugural of the Boot Camp/workshop was hosted by Smt T. Suvarna Kumari and Smt.Ch. Madhavi Sudha, faculty coordinators. Dr. M. Swamy Das Professor, CSE, Chaitanya Bharathi Institute of Technology(A), has given the opening remarks and also emphasized the importance of Unstructured DBs with web development in the current research world. Dr. D. Raman, Professor and Head of the Department of Computer Science and Engineering addressed the participants about CBIT, the Department of Computer Science and Engineering, and the objectives and goals of workshop. A brief introduction was given about the Resource Person, Mr. Varigonda Ravikanth.

Week Wise Topics Discussed as follows

Mr Varigonda Ravikanth, the speaker, started the first session (offline session) by

**Week1**

Introducing the Foundations of NoSQL & MongoDB,  
Discussed Working with MongoDB Compass, and  
Key-value Stores and Semi-structured Data using JSON

**Week 2 (Offline Session)**

Connecting MongoDB with Node.js and performing CRUD  
Conducted Hands-on Session

**Week3/4 (online session)**

Designing & Linking static web pages (HTML5 + CSS3)  
Various Applications of JavaScript (DOM & Event handling)  
Foundations of React JS (Zero-Config Setup, JSX, Components, Props, Events, Lists, Forms, Router)  
Server-side programming using built-in Node JS modules

**Week 5 (online session)**

Express JS (Request & Response Handling, Router)  
MVT with EJS and Hands-on Session

**Objectives of the Workshop:**

To create awareness on Unstructured DBs with Web Development.

The purpose of organizing this workshop/boot camp would be to make students competent in industry-ready.

**Boot-Camp Team:**

Dr. D.Raman HoD, CSE Convenor  
Dr. S. China Ramu, Professor, CSE, Coordinator  
Smt.T.Suvarna Kumari, Asst.Professor, Co-Coordinator  
Smt.Ch.MadhaviSudha, Asst.Professor, Co-Coordinator

**The online Meeting and Recording links of Webex are as follows:**

Webex Links :

11/05/2024

Meeting link: <https://cbithyd.webex.com/cbithyd/j.php?MTID=m76f275e7fbbc39b2e577aa2457b074d4>

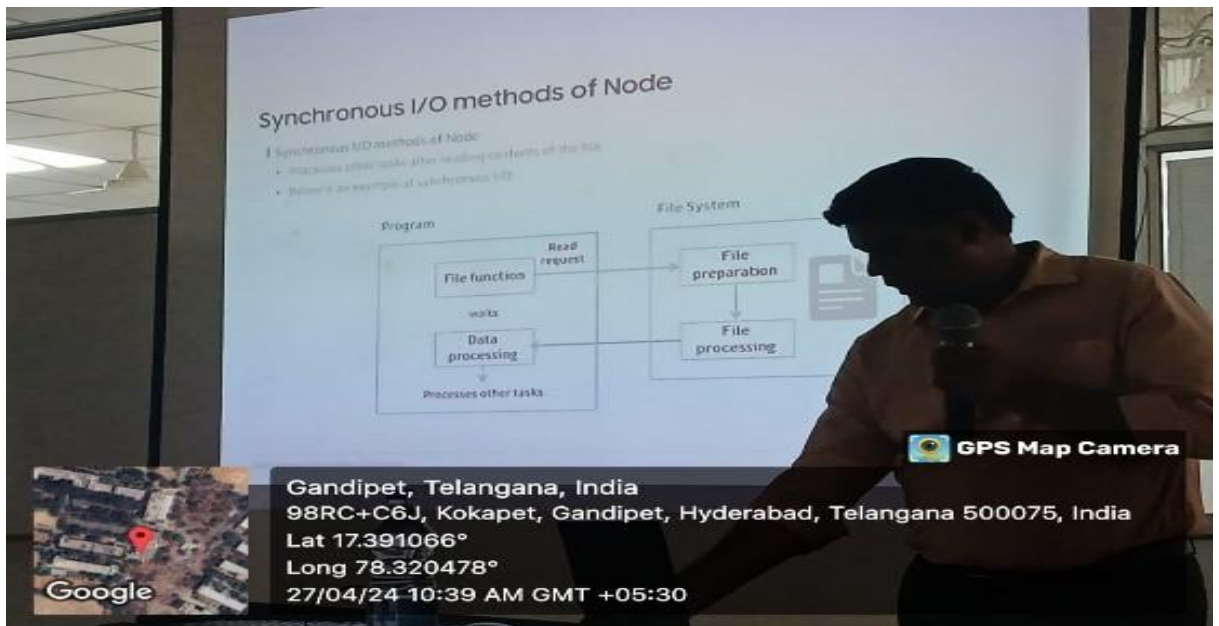
Recordings:

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18/05/2024

Meeting link: <https://cbithyd.webex.com/cbithyd/j.php?MTID=m1231216f3bfeac8a3de0eda1dd825cc2>

Recordings : <https://cbithyd.webex.com/cbithyd/ldr.php?RCID=c773b999fc1d0d04e6cdece394d10050>



Mr.Varigonda Ravikanth's interaction with students during Unstructured DB -Boot Camp with Web Development

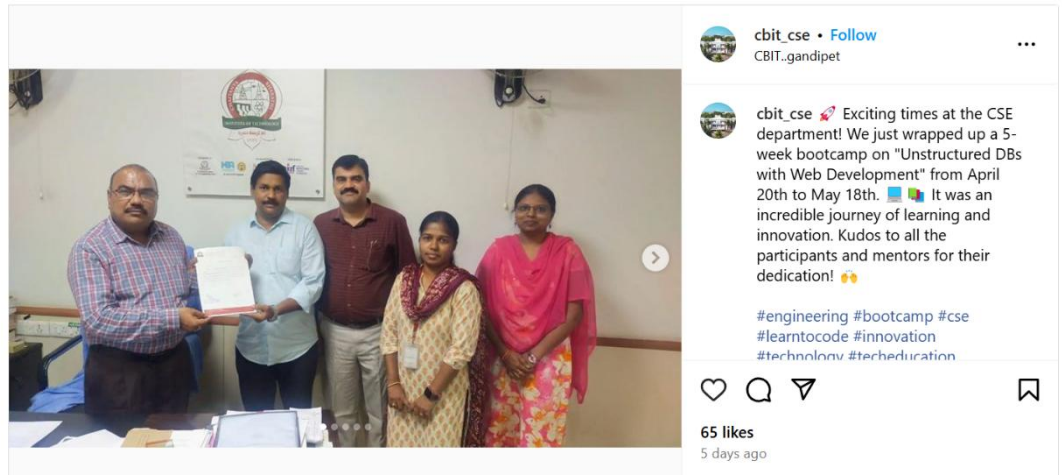




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CBIT CSE OFFICIAL | 🚀 Exciting times at the CSE department! We just wrapped up a 5-week bootcamp on "Unstructured DBs with Web Development" from April 20th to ... | Instagram



Principal C.V.Narasimhulu felicitating Mr.Varigonda Ravikanth , Founder & CEO of Purple Now Technologies  
Picture(left to right) Principal C.V.Narasimhulu , Mr.Varigonda Ravikanth Dr.Dugyala Raman, HoD and Professor  
, Faculty Coordinators : Smt.Ch.MadhaviSudha, Smt T.SuvarnaKumari

➤ **ONE WEEK NATIONAL LEVEL FDP ON “EMERGING RESEARCH TRENDS IN COMPUTER SCIENCE” April 22nd to 26th, 2024**

The department of Computer Science and Engineering at Chaitanya Bharathi Institute of Technology, Hyderabad has conducted a 1 week National Level Faculty Development Programme on “Emerging Research Trends in Computer Science” from April 22nd to 26th, 2024. The convenor for the FDP is Dr.D.Raman, HoD, CSE; coordinator for the FDP is Dr.Sangeeta Gupta, Professor, CSE Department and the co-coordinators are Dr. Kolla Morarjee, Associate Professor, Department of CSE, Dr. B. Ramana Reddy, Assistant Professor, CSE Dept, Mr. M. Venkata Krishna Reddy, Assistant Professor, CSE Dept, Dr. M. Anila, Assistant Professor, CSE Dept.

This FDP aimed to provide an opportunity to the faculty members, researchers, and students to expand their horizons in emerging areas of computer science and engineering through the domain's: Cyber security, AI/ML, Computing paradigms (cloud, fog and edge), Blockchain, IoT. The FDP drove the participants in a research-oriented direction and enabled them to choose a suitable area of expertise and progress with publications and submission of project proposal for funding. A total of 19 sessions, each of 1.5 hour duration were conducted by inviting experts from foreign university, industry, IITs, NITs and R&D sector respectively. About 110 participants from all over the country have attended the programme and actively participated in interactions with the resource persons and gathering more insights into the delivered sessions.



The sessions delivered by all the experts were highly value added and research oriented that drove the participants to focus on the real time case studies.





The entire FDP team thank the Management, Principal Sir Prof.C.V.Narasimhulu and the department of CSE for their continuous support that led to the success of the programme.

## FEB 2024

- **One Week National Bootcamp on “Generative AI” Department of CSE in association with Swecha from 19th to 24th Feb 2024**

Details: Ms Geethika student coordinator has welcomed all the guests on to the Dias. Lightening of the lamp is done by CBIT Principal Prof. C. V. Narasimhulu ,CSE HoD Dr. Raman Dugyala ,Bootcamp convener Dr.M. Swamy Das.Inaugural event took place in hybrid mode .Keynote is given by Mr. Bharath Krishna, Sr. AI Solution Architect, ValueLabs.

Date: 19 th Feb 2024 Time: 1:00 to 2:40 PM

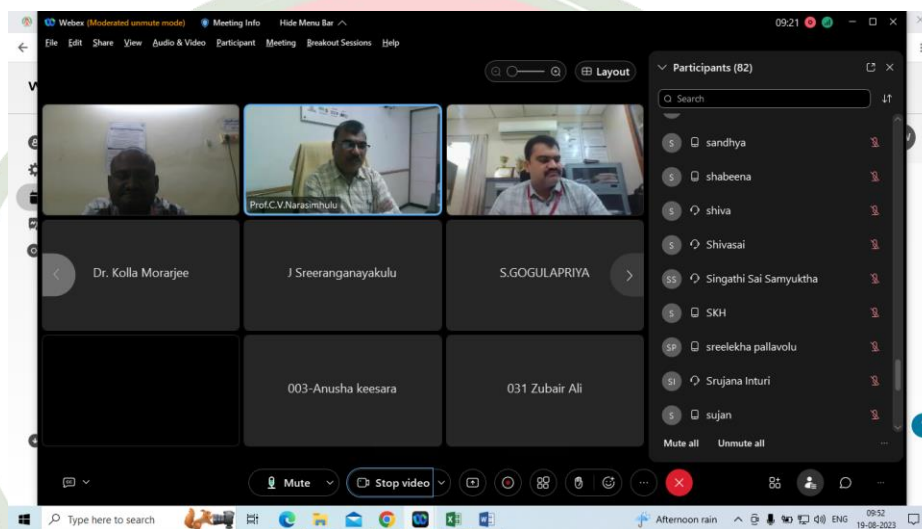
Agenda : Bootcamp Inaugural event Mode: Hybrid



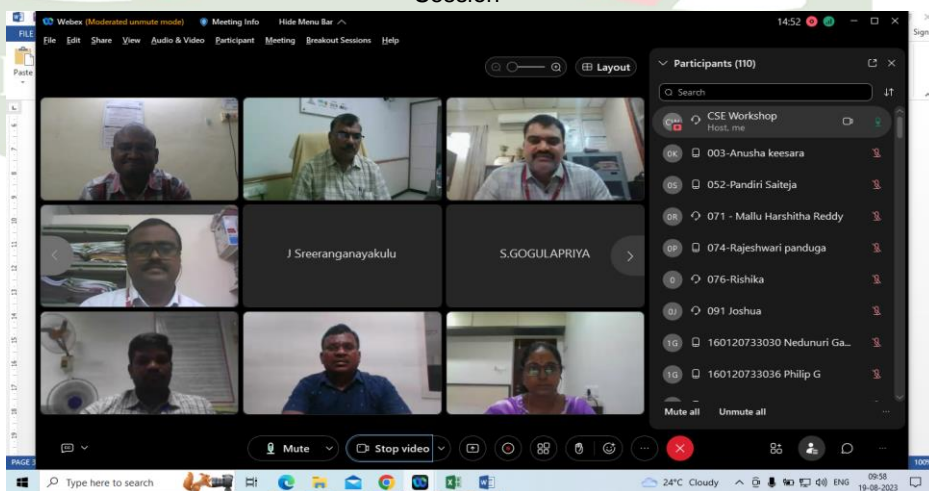
## National Conference/Workshops/Seminar/Webinar

Aug 2023

- The Department of Computer Science and Engineering organized a **Workshop on “Research Paper Writing Tools : Latex and Overleaf”** on **19.08.2023** in online mode which included 430 registrations from different states of India like Tamil Nadu, Andhra Pradesh, Maharashtra, Himachal Pradesh, Karnataka and Telangana etc. The no. of participants who attended is 247. The resource persons for the workshop are **Dr. Premkumar Chithaluru, Associate Professor, CSE Dept.** and **Smt. I Srujana, Assistant Professor, CSE Dept.** Both the resource persons delivered the concepts behind the program and demonstrated with examples. They conducted hands on sessions that enabled participants to understand the concepts clearly. and faculty coordinators are **Dr. K. Morarjee, Associate Professor** and **Mr. M Venkata Krishna Reddy, Assistant Professor** from Department of Computer Science and Engineering



Prof. C.V. Narasimhulu, Principal, CBIT giving the opening remarks in the inaugural Session

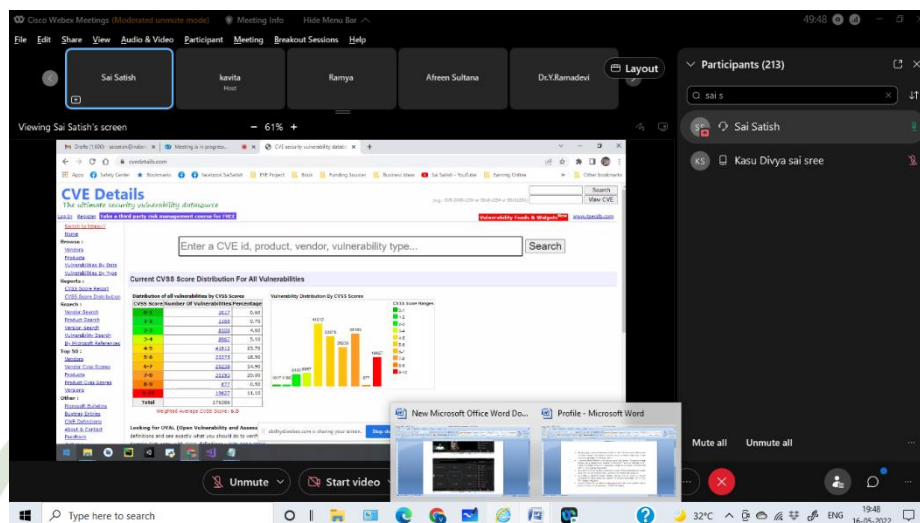


All the Dignitaries, Resource Persons, Organizers and Participants

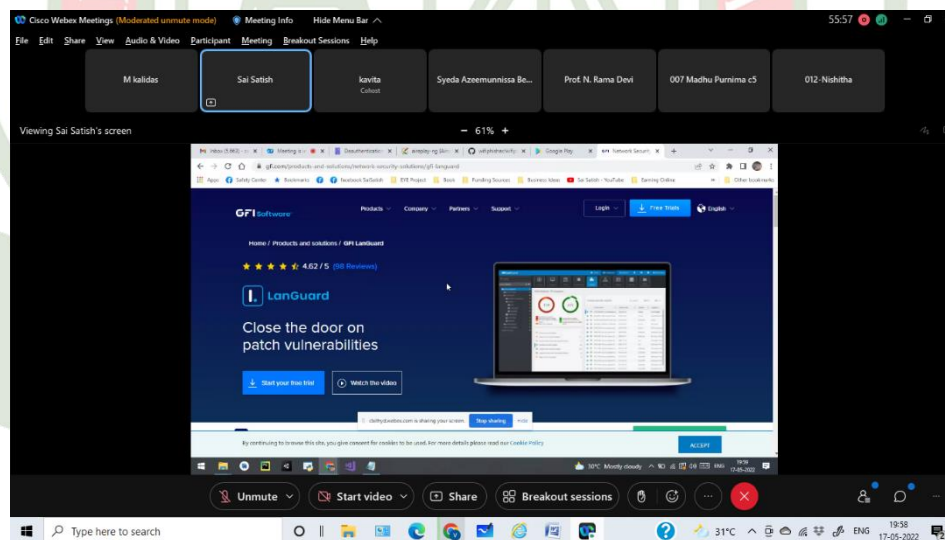
May 2022

- One week online STTP on **“Cyber Security”** was organized from **16-05-2022 to 20.05.2022** through online mode jointly by Department of Computer Science and Engineering and Department of Information Technology which included around 523 participants. Advisor for the STTP is Prof. N.Rama Devi and faculty coordinators are Mr. Satish, Ms. Kavita Agrawal and Mr. M Venkata Krishna Reddy, Assistant Professors from Department of Computer Science and Engineering and Mr. S.Rakesh, Asst. Professor from Department of Information Technology. The resource person for the STTP is **Mr. Sai Satish, Young Entrepreneur, and Founder, CEO**

**of Indian Servers.** The speaker has demonstrated concepts of cyber security on all five days of the STTP as Web Application pen testing, OWASP Top 10 ,Cyber Security Principles, Network Security Attacks & Malware Analysis ,Web & Windows Forensics System & Server Hacking Attacks, Server Hardening



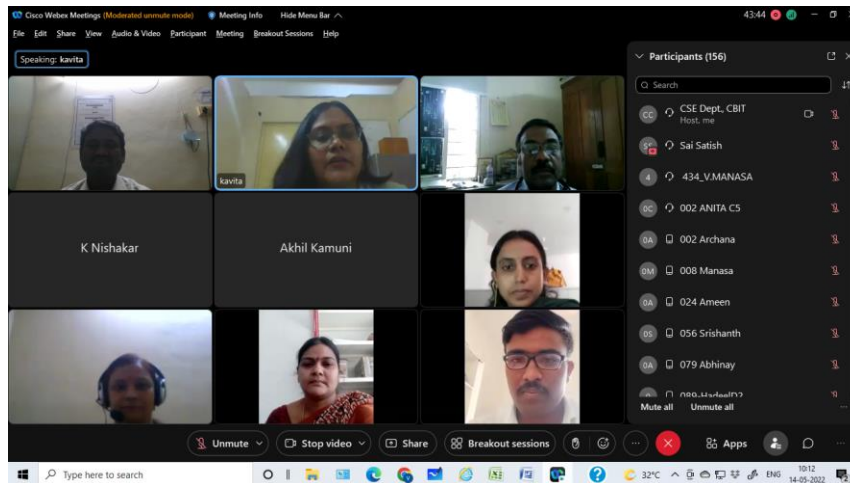
A picture taken while explaining about current status and vulnerabilities



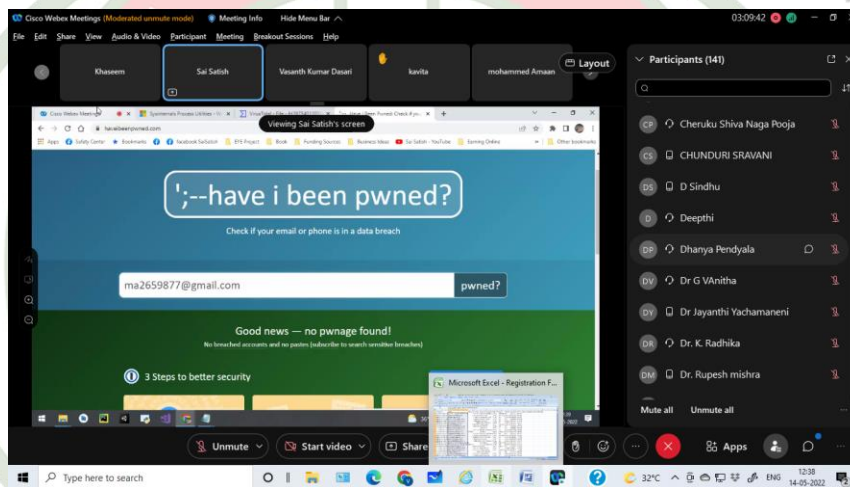
Sri Sai Satish, Resource Person, presenting during the session.

- A 1-day National Level Hands-on Workshop on **“Cyber Security Tools and Techniques: A Practical Approach”** was organized on **14-05-2022** through online mode which included around 193 participants. The co-coordinators for the event were Mr. M.Venkata Krishna Reddy (CSE), Ms. Kavita Agarwal (CSE). The resource person for the event is **Mr. Sai Satish, Young Entrepreneur, and Founder, CEO of Indian Servers**. The speaker has shown the practical demonstration of the following topics in the workshop : SQL Injection, Foot Printing, Scanning : Port, Network and Vulnerability Scanning, Password Cracking, DOS Attacks, Virus Dissemination and Phishing





Inaugural Session of workshop

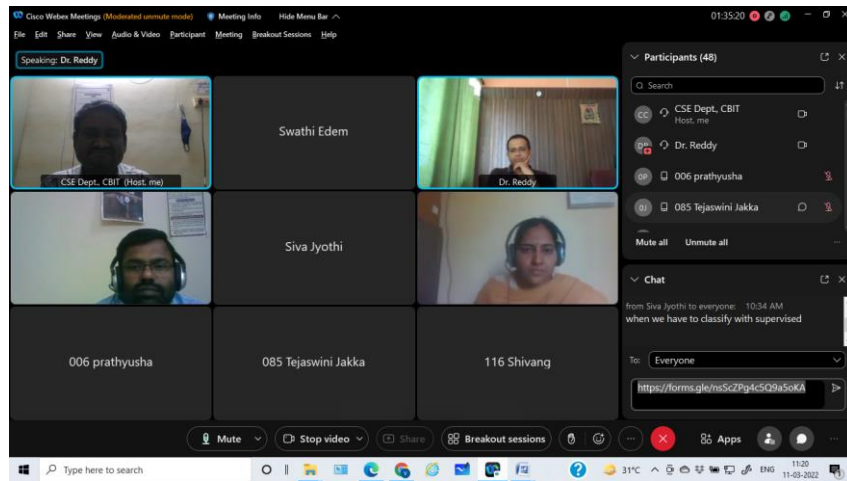


Sri Sai Satish, Speaker, presenting during the session

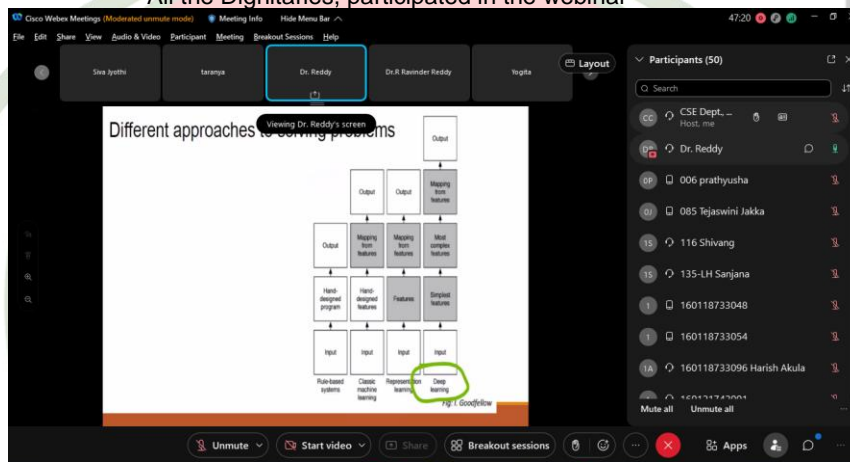
Mar 2022

## INSTITUTE OF TECHNOLOGY

- An Online Webinar on “Natural Language Processing: Applications and Challenges” was organized on **11-03-2022** through online mode which included around 89 participants. The co-coordinators for the event were Dr. R.Ravinder Reddy, Associate Professor and Mr. M. Venkata Krishna Reddy, Assistant Professor, Dept. of CSE. The resource person for the event is **Dr. Damodar Reddy Edla, Associate Professor, Department of Computer Science and Engineering, National Institute of Technology, Goa**. Speaker delivered the concepts of Natural Language Processing - NLP and explained about the importance, technical and research benefits of Natural Language Processing. He also briefed about the various applications and challenges associated with the area of Natural Language Processing. He also exposed the participants to the research areas and career development opportunities in NLP.



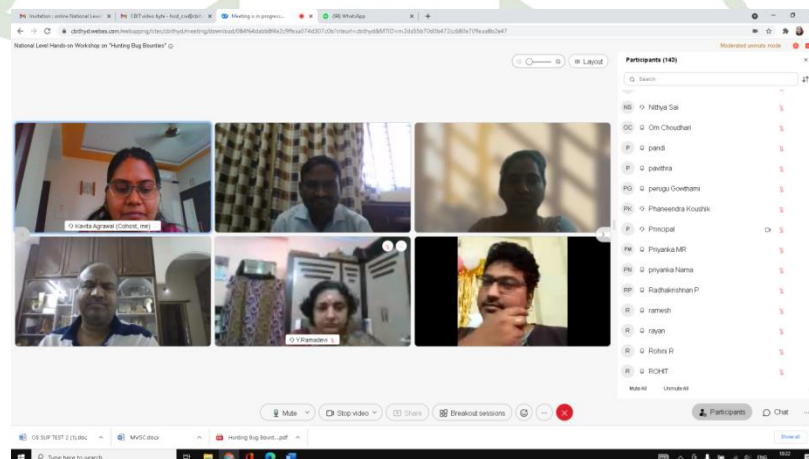
All the Dignitaries, participated in the webinar



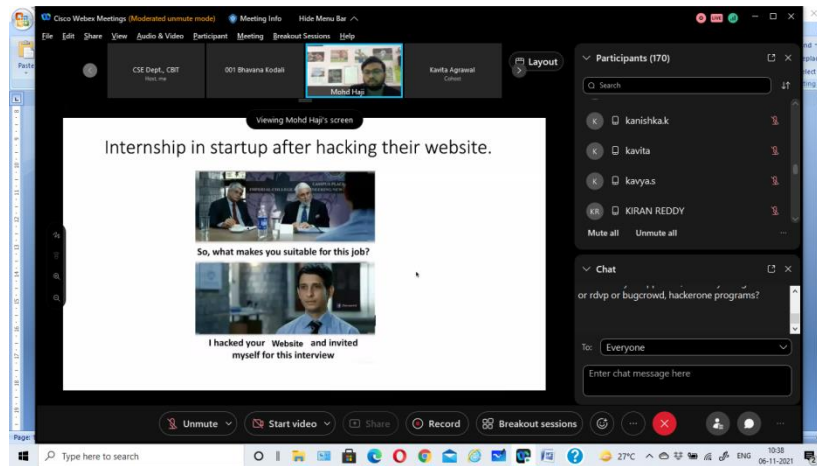
Dr. Damodar Reddy, Resource Person delivering the concept to the participants

**November-2021**

- A 1-day National Level Hands-on e-Workshop on “Hunting Bug Bounties” was organized on 06-11-21 through online mode which included around 250 participants. The co-coordinators for the event were Mr. M.Venkata Krishna Reddy(CSE), Ms. Kavita Agarwal(CSE), Ms. T.Prathima(IT), Ms. A.Shirisa(IT)
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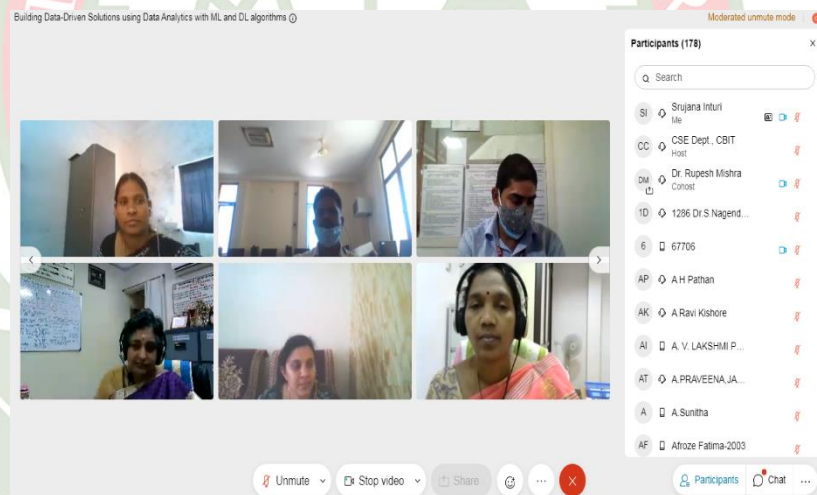
Inaugural Session



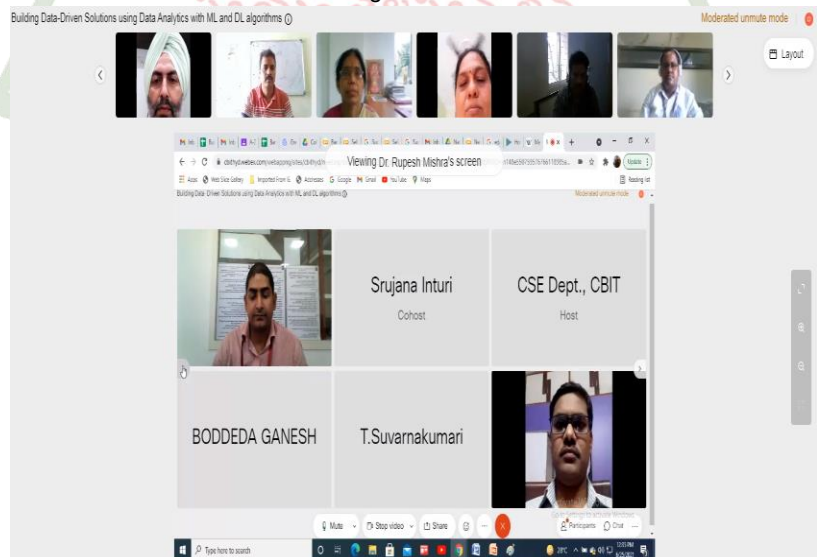
Mr. Mohd. Haji, Speaker, presenting during the session

June2020- June2021

- A 5-days International e-workshop was organized on “ Building Data- Driven Solutions Using Data Analytics with ML and DL Algorithms” from 24-06-21 to 28-06-21.

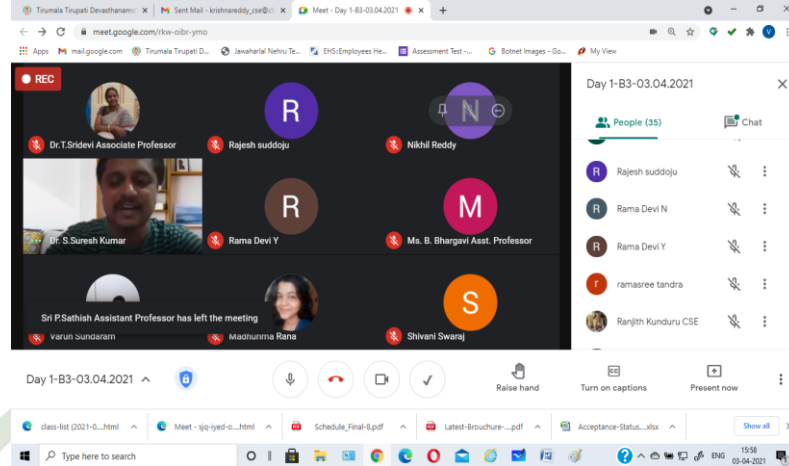


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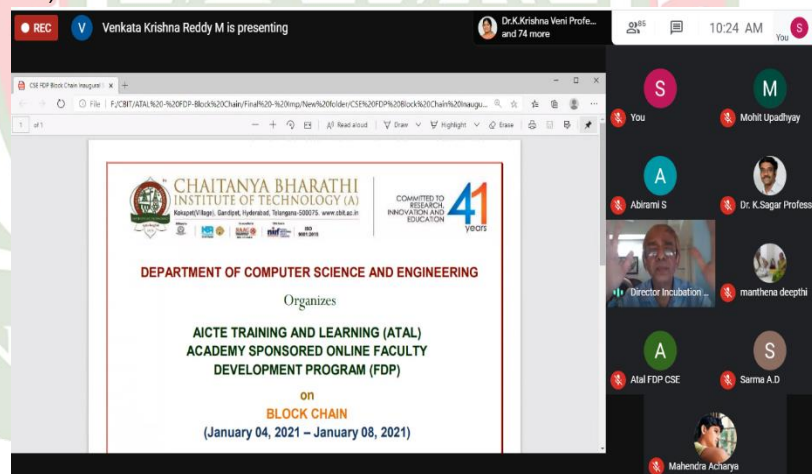


- A 2-day International Conference on “Emerging Trends in Circuit Branch Technologies and Applications” (ETCTA-2021) was organized by department of CSE,ECE,EEE,IT,MCA from 03-04-21 to 04-04-21 through online mode. The Co-Chairperson was Dr.Y. Rama Devi, Head,CSE.

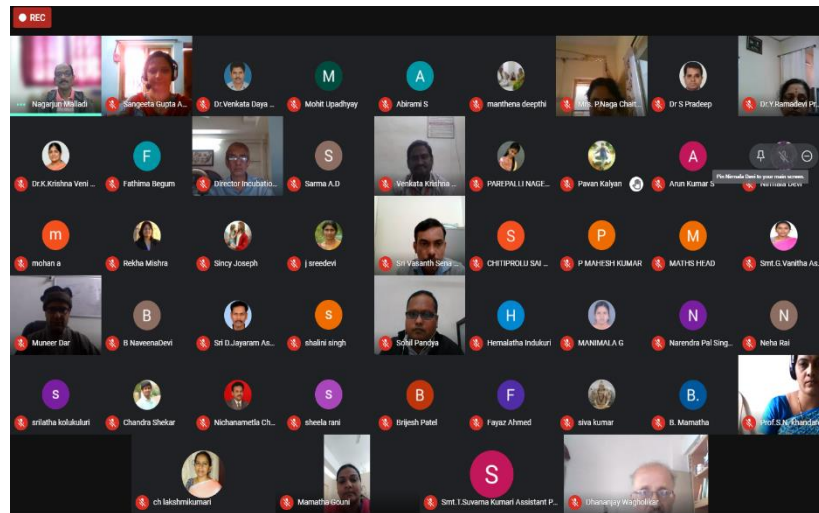


Dr. S.Suresh Is presenting paper

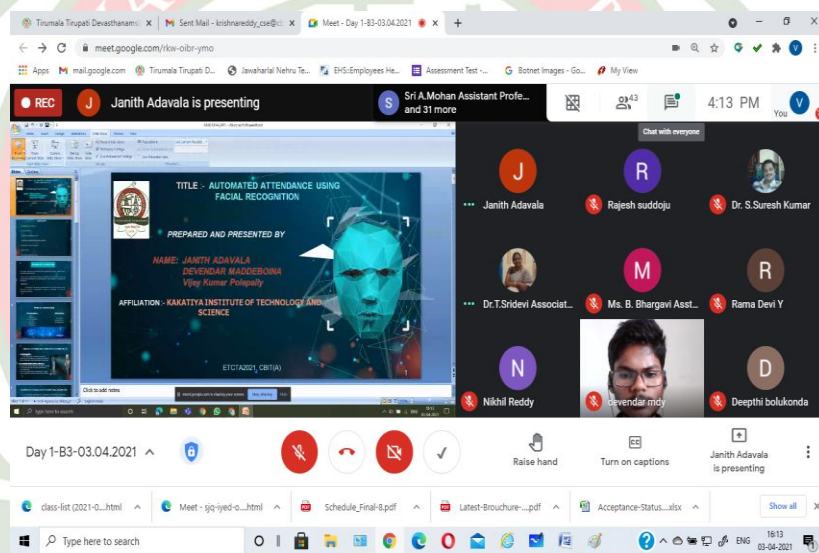
- A 5-day AICTE Training and Learning(ATAL) Academy Sponsored Online Faculty Development Program(FDP) on “Blockchain” was organized from 04-01-21 to 08-01-21 through online mode which included around 200 participants. The co-ordinator for the events were Dr.Sangeeta Gupta(CSE) and Mr. M.Venkata Krishna Reddy(CSE)



The inaugural session by Prof. Dr. U.K.Choudhary

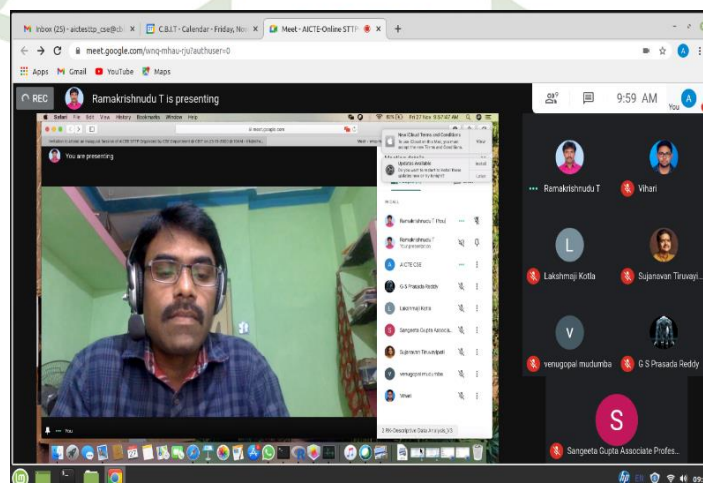


A session chaired by Dr. Nagarjuna Malladi

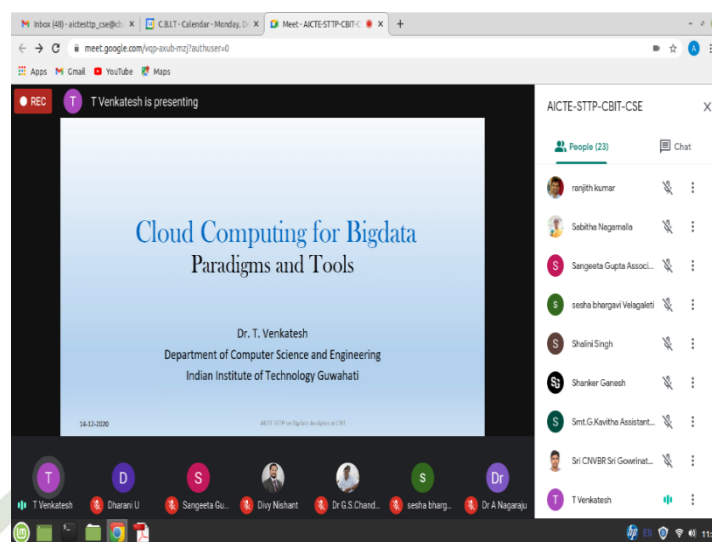


One of the participant is presenting paper.

- An AICTE Sponsored Online Short Term Training Program(STTP) on “Data Science for Bigdata Analytics in Cloud using Advanced Tools” was organized by department of CSE, CBIT in 2 phases, First phase from 23-11-20 to 28-11-20 and second phase from 14-12-20 to 18-12-20. The co-ordinator for the programs were Dr.E.Padmalaatha(CSE) and Mr.B.Sateesh(CSE).



Phase-I: Prof. T.Ramakrishnudu is presenting during the session



Phase II: Dr. T.Venkatesh is presenting

**June2019-May2020**

- A 5-day e-FDP on "Artificial Intelligence" was organized from 22nd to 26th May 2020 Chaitanya Bharathi Institute of Technology (Departments of CSE, IT & MCA) in collaboration with Brain-O-Vision Solutions India Pvt. Ltd., through online mode which attracted 625 participants. The Co-ordinators for this event were Dr.Sangeeta Gupta (CSE Dept), Sri.M.Ramchander(MCA Dept), Smt.Y.Gnyana Deepa( IT Dept).
- A seminar was organized by Dept. of CSE and CBIT IIC on "Design Thinking" on 12-03-20 by Abhimanyu Bhardwaj Co-founder and CEO of Launch Space, HYD,.
- A 1-day seminar was organized on "Access to Higher education " on 8-01-2020 by Princeton review manager Mr.G.Sudheer.
- A 1-day seminar was organized on" Innovations in MUST research " on 9-01-20 by MUST research founder and President Mr.Joy Mustafi.
- Total 71 participants faculties, research scholars from various institutions were participated. The aim of the session is to discuss about accessibility of the research process and an overview of the leading discourses by suggesting distinct schools of thought, their core aims, and argumentations





Talk and Discussion on Access to Research Process Schools of Thought CBIT C-203 on 18th October 2019 by Dr.L.Pratap Reddy, Professor JNTUH, Working Chairman SWECHA.

- A one day workshop was organized on “Business and Research on Artificial Intelligence Network Summit (BRAINS)” in association with NASSCOM and MUST at CBIT, Hyd on 28th Sept. 2019.

#### June2018- May 2019

- Tech Tara Event was conducted on the Occasion of Women's Day Celebrations at CBIT. Compile- Build-Run was an interactive event where students gave innovative ideas on diverse areas of Computer Science on 6th and 7th of March, 2019.



Panel of Dr.Priti Chandra -Scientist-E DRDO, Ms Rani Paruchuri -founder and CEO of DreamTekis Software, Miss Pravalika Achuyutuni of Swecha Foundation and, Mrs Devi-social activist and Dr.Y.Rama Devi ,professor ,CSE,CBIT as moderator have interacted with Students.

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Panel discussion with Srividya maharshi-Journalist,Singer,Actor,VoiceArtist, prathyusha parakala –RJ, Part of Climate force Antarctica expedition 2018, P.padmavathi-chief Functionary and project In-charge, Kasturba Gandhi National Memorial trust, Wing Commander Aziz Tayyaba-First batch of women in Indian Air Force,corporate leader, and Dr.T.Srivani –Head,Department of Hispanic and Italian Studies,EFLU as Moderator of the panel.



Wing Commander Aziz Tayyaba-First batch of women in Indian Air Force, along with the CBIT students and staff.

- Social Event - Working women have come together to put forward a charter of demands that would create safer spaces for women.



Convention of Working Women for Safer Spaces , Feb -2, 2020, Phoenix Arena TSIISC PARK.

- The Computer Science and Engineering department have enthusiastically taken up the initiative of MHRD on 27th to 29th Jan 2020 to encourage citizens to work towards Swachh Bharath through Swachhta Pakhwada. More than 3000 people has actively participated.



DR.P.Ravinder Reddy ,Principal ,CBIT along with faculty of CSE took Swachhta pledge.

