



**CHAITANYA BHARATHI  
INSTITUTE OF TECHNOLOGY**

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

Approved by  Affiliated to  UGC Autonomous  12 Programs Accredited by  Grade A++ in  All India Ranking 151-200 Band

COMMITTED TO  
RESEARCH,  
INNOVATION AND  
EDUCATION

**47**  
years



## **Report on One-Week National FDP/Workshop**

**“Optimization and Machine Learning  
Techniques for Engineering Applications”**

**05th – 09th January 2026**

**DEPARTMENT OF ELECTRICAL AND  
ELECTRONICS ENGINEERING**



# 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

## INTRODUCTION:

The Department of Electrical and Electronics Engineering, Chaitanya Bharathi Institute of Technology (CBIT), Hyderabad, successfully organized a One-Week National Faculty Development Programme (FDP)/Workshop on “**Optimization and Machine Learning Techniques for Engineering Applications**” from **05th to 09th January 2026**. The programme was designed to equip faculty members, research scholars, and industry professionals with comprehensive theoretical knowledge and practical exposure to modern optimization techniques, machine learning (ML) algorithms, and their applications across diverse engineering domains. A total of **86 participants** registered and 40 actively participated in the programme.

## CONTENTS:

- Brochure
- Detailed Time Table
- Attendance Sheets
- Details of External Participants
- Session Wise Report
- Certificate Sample
- Conclusion



# CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY

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



COMMITTED TO RESEARCH, INNOVATION AND EDUCATION **47** years

## BROCHURE:

### FDP/Workshop Objectives

- ❖ To provide a strong foundation in optimization techniques and machine learning concepts relevant to engineering problems.
- ❖ To familiarize participants with classical and modern optimization algorithms used in engineering design and decision-making.
- ❖ To impart hands-on experience using MATLAB for implementing optimization and machine learning models.
- ❖ To expose participants to recent trends and applications of optimization and machine learning in core engineering domains.
- ❖ To bridge the gap between theoretical concepts and practical implementation through case studies and lab sessions.
- ❖ To encourage research orientation and interdisciplinary applications in optimization and machine learning.

### FDP/Workshop Outcomes

After completion of this workshop, participants will be able to:

- ❖ Understand and explain fundamental concepts of optimization and machine learning techniques.
- ❖ Develop and implement machine learning models using MATLAB for classification, regression, and prediction tasks.
- ❖ Apply optimization techniques to tune and improve ML models for enhanced performance.
- ❖ Use MATLAB toolboxes effectively, such as Optimization Toolbox, Global Optimization Toolbox, and Machine Learning Toolbox.

### Contact Details

Mobile: +91-9885308964/9885785450  
Email Id: [balasubbareddy\\_eee@cb.it.ac.in](mailto:balasubbareddy_eee@cb.it.ac.in)

### Chief Patron

**Sri. N. Subash**  
President, CBIT

### Patron

**Prof. C. V. Narasimhulu**  
Principal, CBIT

### Coordinators

**Dr. M. Balasubbareddy**  
Professor & HoD, Dept. of EEE  
**Dr. K. Krishnaveni**  
Professor & Vice Principal (Academics)

### Co-coordinators

**Dr. P. Kowstuba**  
Associate Professor, Dept. of EEE  
**Dr. T. Sukanth**  
Assistant Professor, Dept. of EEE

### Advisory Committee

**P.V.R. Ravindra Reddy**  
Vice Principal (Administration)  
**Dr. U.K. Choudhury**  
Advisor, I&I  
**Dr. G. Suresh Babu**  
Professor, Dept. of EEE  
**Dr. T. Murali Krishna**  
Associate Director, IQAC  
**Dr. T. Sudhakar Babu**  
Associate Director, R&D



## Department of Electrical and Electronics Engineering

One Week

National FDP/Workshop  
on  
Optimization and Machine Learning Techniques for Engineering Applications  
05<sup>th</sup> – 09<sup>th</sup> January 2026



## Chaitanya Bharathi Institute of Technology

(Autonomous under UGC)  
Affiliated to Osmania University  
Kokapet (Village), Gandipet,  
Hyderabad – 500075  
Telangana State, India.  
[www.cb.it.ac.in](http://www.cb.it.ac.in)

### Chaitanya Bharathi Institute of Technology (CBIT)

CBIT is one of the premier Engineering Institutes in India, a pioneer in Telangana State, which is at the idyllic surroundings of Gandipet Lake, Hyderabad. The college offers 12 UG and 10 PG programs. It has been standing as a temple of knowledge for the past 45 years by producing more than 25,000 Eminent and skillful Graduate Engineers, who are successful in their Careers, serving all over the world. CBIT Students are prepared and perfected to secure Placements in reputed MNCs. The Institute has been accredited by NAAC – UGC with 'A++' Grade and several programs are accredited by NBA – AICTE. The UGC has granted Autonomous Status from the Academic Year 2013-14 onwards. Stringent Academic Standards, Industry Compliant Teaching Methodology, Research Projects from Private and Public Sector organizations Industries in Engineering and Management and Consultancy Practice, enabled the Institute to establish its Identity in Technical Education and is ranked as one of the best amongst Private Engineering Colleges in both the Telugu Speaking States.

### About Department

CBIT started the Electrical & Electronics Engineering UG program in 1994 and has been accredited 5 times since 2004 by NBA. The recent accreditation in 2021 is for 6 years. The intake was increased from 60 to 120 in the Academic Year 2013-14. The Department started offering a PG course in Power Systems and power Electronics in 2006 with an intake of 18 and was accredited by the NBA in the year 2016. The department has received grants worth around ₹90 lakhs from AICTE under RPS, SPARC, MODROBS, FDP, STTP, etc. The Department is offering consultancy services worth ₹21 lakhs in collaboration with Foreign Universities in Renewable Energy Systems. The Department is also certified by ISO 9001:2015. The Department is recognized as a Research Centre in 2017 by Osmania University to carry out research for the award of Ph.D. degrees.

### About FDP/Workshop

The One Week National FDP/Workshop on Optimization and Machine Learning Techniques for Engineering Applications is designed to equip faculty members, researchers, students and industry professionals with comprehensive knowledge and practical skills in modern optimization and machine learning methodologies. With the rapid advancement of intelligent systems and data-driven engineering solutions, optimization and machine learning have become essential tools across all engineering disciplines.

This FDP/workshop emphasizes a balanced blend of theory and hands-on practice using MATLAB, enabling participants to understand, implement, and analyze optimization algorithms and machine learning models effectively. Through expert lectures, practical MATLAB sessions, case studies, and interactive discussions, participants will gain insights into recent trends, research challenges, and industrial applications of optimization and machine learning. The FDP also aims to enhance teaching effectiveness, promote interdisciplinary research, and

### Workshop Registration Link

<https://forms.gle/5GZJn2LJezYwTiDx5>

### Registration Fee

CBIT Participants: No Fees  
Other participants: ₹100



Merchant Name: CBITSTUDENTACTIVITIES  
Mobile Number: 8466997204

### Resource Persons

**Dr. Sumit Bhardwaj**  
Manager – Analytics, Concenterix India, Former Postdoctoral Research Scholar, Lund University, Sweden  
**Dr. Gaurav Kumar**  
Founder of Magma Research and Consultancy Services, Ambala  
**Dr. Jagriti Saini**  
Founder Eternal RESTEM, Sunder Nagar, HP  
**Dr. M. Balasubbareddy**  
Professor, Electrical and Electronics Engineering CBIT, Hyderabad



EEE department Front View



# CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY

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



COMMITTED TO RESEARCH, INNOVATION AND EDUCATION

# 47

years

## TIME TABLE:

### TENTATIVE TIMETABLE

DAY & DATE	Session - 1 09.30 AM to 11.00 AM	Session - 2 11.30 AM to 1.00 PM	Session - 3 2.30 PM to 4.00 PM
Monday 05/01/2026	Inauguration & Digital Twin applications in power systems (AMP)		Overview of Machine Learning and How ML uses Optimization (JS)
Tuesday 06/01/2026	Teaching Learning Based Optimization (TLBO) (BSR)	Implementation of Teaching Learning Based Optimization (TLBO) in MATLAB (BSR)	Machine Learning for Engineering Applications (BSR)
Wednesday 07/01/2026	Implementation of Cuckoo Search Algorithm in MATLAB (BSR)	Generative AI & Large Language Models (LLMs) for Engineering Applications (GK)	Case Study on Smart Grid Load Monitoring Analysis & Prediction (JS)
Thursday 08/01/2026	Advanced Machine Learning (PCA) using Python (SB)	Gen AI based Conversational Intelligence (SB)	Optimizing IoT Sensor Data at the Edge using Lightweight ML Models (JS)
Friday 09/01/2026	Hands on with Hyperparameter Optimization of Random Forest (JS)	Solar Power Forecasting with LSTM Optimization (JS)	Valediction (BSR)



# 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

## ATTENDANCE SHEET:

**CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY**  
 An Autonomous Institute | Affiliated to Osmania University  
 Kokapet Village, Gandipet Mandal, Hyderabad, Telangana-500075, www.cbit.ac.in  
 UGC Autonomous | 12 Programs Accredited by NBA | Grade A++ in NAAC | All India Ranking 151-200 Band NIRF

COMMITTED TO RESEARCH, INNOVATION AND EDUCATION  
**47** years

### DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

One Week National FDP/Workshop on Optimization and Machine Learning Techniques for Engineering Applications  
 From 5th to 9th January 2026

#### ATTENDANCE SHEET

S.NO	NAME OF THE PARTICIPANT	DEPARTMENT	COLLEGE NAME	05-01-2026	06-01-2026	07-01-2026	08-01-2026	09-01-2026
1	Gangula Kamalaker	EEE	ANURAG UNIVERSITY	K1	M	K1	Ab	K1
2	N SANTOSH KUMAR	EEE	CBIT (A)	NSK	NSK	Ab	Ab	Ab
3	Kudla Supriya	EEE	CBIT (A)	Ab	Ab	Ab	Ab	Ab
4	CHOLLETI HARISH	EEE	CBIT (A)	Ab	Ab	Ab	Ab	Ab
5	YERRA HARSHITH KUMAR	EEE	CBIT (A)	Ab	Ab	Ab	Ab	Ab
6	Kakara Srikanth	Civil Engineering	CBIT (A)	Ab	Ab	Ab	Ab	Ab
7	Tarvi Bejadi	EEE	CBIT (A)	Ab	Ab	Ab	Ab	Ab
8	Dr. Palle Kiran	Mathematics	CBIT (A)	Ab	Ab	Ab	Ab	Ab
9	DEVAREDDY HARSHA	EEE	CBIT (A)	Ab	Ab	Ab	Ab	Ab
10	Samanvitha Vermula	EEE	CBIT (A)	Ab	Ab	Ab	Ab	Ab
11	Dr. D. Nagadevi	EEE	CBIT (A)	Ab	Ab	Ab	Ab	Ab
12	MAHABOOB BASHA D	BIOTECHNOLOGY	CBIT (A)	Ab	Ab	Ab	Ab	Ab
13	Akhil Sai N	EEE	CBIT (A)	Ab	Ab	Ab	Ab	Ab
14	M Kalyan	Civil Engineering	CBIT (A)	Ab	Ab	Ab	Ab	Ab
15	MVV ANEESH	EEE	CBIT (A)	Ab	Ab	Ab	Ab	Ab
16	Dr Yesubabu Konga	School of Management Studies	CBIT (A)	Ab	Ab	Ab	Ab	Ab
17	Dr. S. TULASI RAM	School of Management Studies	CBIT (A)	Ab	Ab	Ab	Ab	Ab
18	Dr. C. Srisaitham	EEE	CBIT (A)	Ab	Ab	Ab	Ab	Ab
19	Dr. M. L. N. ACHARYULU	ECE	CBIT (A)	Ab	Ab	Ab	Ab	Ab
20	Dr. B. Krishna Chaitanya	EEE	CBIT (A)	Ab	Ab	Ab	Ab	Ab
21	Sai Sruthi	Eee	CBIT (A)	Ab	Ab	Ab	Ab	Ab
22	Dr. B. Ganesh	Chemical Engineering	CBIT (A)	Ab	Ab	Ab	Ab	Ab
23	Sai Krishna Kondoju	ECE	CBIT (A)	Ab	Ab	Ab	Ab	Ab
24	M. Amamath	Mathematics	CBIT (A)	Ab	Ab	Ab	Ab	Ab
25	MANASA KOTHA	CIVIL ENGINEERING	CBIT (A)	Ab	Ab	Ab	Ab	Ab
26	RANJITH PULYALA	ECE	CBIT (A)	Ab	Ab	Ab	Ab	Ab
27	Dr. Ch. Venkata Krishna Reddy	EEE	CBIT (A)	Ab	Ab	Ab	Ab	Ab

S.NO	NAME OF THE PARTICIPANT	DEPARTMENT	COLLEGE NAME	05-01-2026	06-01-2026	07-01-2026	08-01-2026	09-01-2026
28	G Venkatesh	EEE	CBIT (A)	Ab	Ab	Ab	Ab	Ab
29	Dr. Jnana Ranjan Khuntia	Civil Engineering	CBIT (A)	Ab	Ab	Ab	Ab	Ab
30	Jinukula Madhu	IT	CBIT (A)	Ab	Ab	Ab	Ab	Ab
31	U. Poornachandar	CSE	CBIT (A)	Ab	Ab	Ab	Ab	Ab
32	sumith shinde	EEE	CBIT (A)	Ab	Ab	Ab	Ab	Ab
33	GEEDIKANTI SRIKANTH	INFORMATION TECHNOLOGY	CBIT (A)	Ab	Ab	Ab	Ab	Ab
34	Dr. M. RAJ KUMAR NAIK	ECE	CBIT (A)	Ab	Ab	Ab	Ab	Ab
35	Dudam Bharath Kumar	Civil Engineering	ANURAG UNIVERSITY	Ab	Ab	Ab	Ab	Ab
36	K SRINIVASA RAO	EEE	ANURAG UNIVERSITY	Ab	Ab	Ab	Ab	Ab
37	Srikanth Konki	Civil Engineering	CBIT (A)	Ab	Ab	Ab	Ab	Ab
38	Dr Guntha Karthik	ECE	Stanley College of Engineering and Technology for Women(A)	Ab	Ab	Ab	Ab	Ab
39	DASYAM SUSHMA	EEE	CBIT (A)	Ab	Ab	Ab	Ab	Ab
40	Ashutosh Pandey	BIOTECH	CBIT (A)	Ab	Ab	Ab	Ab	Ab
41	Udaykiran Yervuaka	EEE	CBIT (A)	Ab	Ab	Ab	Ab	Ab
42	Yamini Anugula	EEE PS&PE	CBIT (A)	Ab	Ab	Ab	Ab	Ab
43	Baddula mounika	EEE	CBIT (A)	Ab	Ab	Ab	Ab	Ab
44	Kontham Sridhar Babu	ECE	CBIT (A)	Ab	Ab	Ab	Ab	Ab
45	Chunchu vineeth	Power system and power electronics	CBIT (A)	Ab	Ab	Ab	Ab	Ab
46	L. Rama Basanthi	ECE	CBIT (A)	Ab	Ab	Ab	Ab	Ab
47	M Akshar prasad	Eee-PSPE	CBIT (A)	Ab	Ab	Ab	Ab	Ab
48	B SURESH KUMAR	EEE	CBIT (A)	Ab	Ab	Ab	Ab	Ab
49	KISHORE M	EEE	CBIT (A)	Ab	Ab	Ab	Ab	Ab
50	B YADAVAH	EEE	CBIT (A)	Ab	Ab	Ab	Ab	Ab
51	DHODDI ASHOK	EEE	CBIT (A)	Ab	Ab	Ab	Ab	Ab
52	Samatha T	EEE	CBIT (A)	Ab	Ab	Ab	Ab	Ab
53	P Rajasakhar	EEE	CBIT (A)	Ab	Ab	Ab	Ab	Ab
54	SANDEEP KASTHURI	EEE	CBIT (A)	Ab	Ab	Ab	Ab	Ab
55	DASYAM SUSHMA	EEE	CBIT (A)	Ab	Ab	Ab	Ab	Ab
56	Ch kavya	EEE	CBIT (A)	Ab	Ab	Ab	Ab	Ab
57	Ch kavya	EEE	CBIT (A)	Ab	Ab	Ab	Ab	Ab
58	Pravalika	Ece	CBIT (A)	Ab	Ab	Ab	Ab	Ab
59	JALLELA DEVARAJ	Civil Engineering Department	CBIT (A)	Ab	Ab	Ab	Ab	Ab
60	CHOLLETI HARISH	EEE	CBIT (A)	Ab	Ab	Ab	Ab	Ab
61	Udaykiran Yervuaka	EEE	CBIT (A)	Ab	Ab	Ab	Ab	Ab
62	Kamman Naveen	ECE	CBIT (A)	Ab	Ab	Ab	Ab	Ab
63	BYadiah	EEE	CBIT (A)	Ab	Ab	Ab	Ab	Ab



# 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

S.NO	NAME OF THE PARTICIPANT	DEPARTMENT	COLLEGE NAME	05-01-2026	06-01-2026	07-01-2026	08-01-2026	09-01-2026
64	K.Mallesha	EEE	CBIT (A)	Ab	Ab	Ab	Ab	Ab
65	S SRINIVAS	EEE	CBIT (A)	Ab	Ab	Ab	Ab	Ab
66	Devireddy Sathish	EEE	CBIT (A)	Ab	Ab	Ab	Ab	Ab
67	N SANTOSH KUMAR	EEE	CBIT (A)	Ab	Ab	Ab	Ab	Ab
68	K MALLESHA	EEE	CBIT (A)	Ab	Ab	Ab	Ab	Ab
69	B Maheshwar	EEE	CBIT (A)	Ab	Ab	Ab	Ab	Ab
70	P. Venumdhavachary	EEE	CBIT (A)	Ab	Ab	Ab	Ab	Ab
71	A.Krishnama Chary	EEE	CBIT (A)	Ab	Ab	Ab	Ab	Ab
72	GANDURI SURENDER	ECE	CBIT (A)	Ab	Ab	Ab	Ab	Ab
73	Palabindela Anitha	Chemical Engineering	CBIT (A)	Ab	Ab	Ab	Ab	Ab
74	DHODDI ASHOK KUMAR	EEE	CBIT (A)	Ab	Ab	Ab	Ab	Ab
75	P. Hemeshwar Chary	EEE	CBIT (A)	Ab	Ab	Ab	Ab	Ab
76	Sangeetha	EEE-PSPE	CBIT (A)	Ab	Ab	Ab	Ab	Ab
77	Madhulika Das	EEE	CBIT (A)	Ab	Ab	Ab	Ab	Ab
78	Dr. T. MURALI KRISHNA	EEE	CBIT (A)	Ab	Ab	Ab	Ab	Ab
79	Lingam Saikumar	EEE	CBIT (A)	Ab	Ab	Ab	Ab	Ab
80	Pranay udugula	EEE	CBIT (A)	Ab	Ab	Ab	Ab	Ab
81	Yerrolu Pavithra	EEE-1(D1)	CBIT (A)	Ab	Ab	Ab	Ab	Ab
82	SADIA ANJUM	ECE	CBIT (A)	Ab	Ab	Ab	Ab	Ab
83	Kavita Goura	AI&ML	CBIT (A)	Ab	Ab	Ab	Ab	Ab
84	Dhruvan shiv kumar	EEE	CBIT (A)	Ab	Ab	Ab	Ab	Ab
85	Editheveni Surya vamshidhar rao	EEE	CBIT (A)	Ab	Ab	Ab	Ab	Ab
86	Dr. Inturi Vamsi	Mechanical Engineering	CBIT (A)	Ab	Ab	Ab	Ab	Ab
87	Dr. Inturi Vamsi	Mechanical Engineering	CBIT (A)	Ab	Ab	Ab	Ab	Ab
88	T. Parameshwar	EEE	Vidya Jyothi Institute of Technology, Aziz Nagar, Hyderabad	Ab	Ab	Ab	Ab	Ab
89	Yerrolu Pavithra	EEE	CBIT (A)	Ab	Ab	Ab	Ab	Ab
90	Lakshmi Sini Polaki	Computer Science Engineering	CBIT (A)	Ab	Ab	Ab	Ab	Ab
91	Dr.M.Sri Suresh	EEE	CBIT (A)	Ab	Ab	Ab	Ab	Ab
92	SUDHAKAR Babu	EEE	CBIT (A)	Ab	Ab	Ab	Ab	Ab
93	Bommadevara Kavitha	Information Technology	CBIT (A)	Ab	Ab	Ab	Ab	Ab
94	MANDARI SANTHOSH KUMAR	PSPE	CBIT (A)	Ab	Ab	Ab	Ab	Ab
95	P Rajasekhar	EEE	CBIT (A)	Ab	Ab	Ab	Ab	Ab
96	G V Haripriya	EEE	CBIT (A)	Ab	Ab	Ab	Ab	Ab

## EXTERNAL PARTICIPANTS:



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

### Department of Electrical and Electronics Engineering

One-Week National FDP/Workshop On Optimization and Machine Learning Techniques for Engineering Appl

#### LIST OF PARTICIPANTS PAID REGISTRATION AMOUNT

S.No	NAME OF THE FACULTY	COLLEGE NAME	UTR NUMBER	AMOUNT PAID
1	Gangula Kamalaker	ANURAG UNIVERSITY	695231578715	100
2	K SRINIVASA RAO	ANURAG UNIVERSITY	536364376077	100
3	Dr.Guntha Karthik	Stanley College of Engineering and Technology for Women(A) Vidya Jyothi Institute of Technology, Aziz Nagar, Hyderabad	536490186795	100
4	T. Parameshwar	536323582066		100
Total Amount in Rupees				400





# 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

## SESSION WISE REPORT:

### Inaugural Session:



4 HYDERABAD | TUESDAY | JANUARY 06 2026

Deccan Vision

## National FDP on Optimization and Machine Learning Launched at CBIT

DECCAN NEWS SERVICE  
HYDERABAD

The Department of Electrical and Electronics Engineering (EEE) at Chaitanya Bharathi Institute of Technology (CBIT) inaugurated its National Faculty Development Programme (FDP) and Workshop on 'Optimization and Machine Learning Techniques for Engineering Applications' on 5th January 2026. Sched-

uled from January 5th to 9th, the programme aims to enhance the competencies of faculty members in advanced optimization and machine learning methodologies applicable across diverse engineering domains. The inaugural function welcomed dignitaries, resource persons, and participants from academic institutions and industries across the country. The event was graced by Chief Guest and Keynote

Speaker Professor Alivelu Manga P, Professor, Department of Electrical and Electronics Engineering, and Associate Dean – Academic Graduate Studies and Research (AGSR) Division, BITS Pilani, Hyderabad Campus. In her address, Professor Manga highlighted the increasing importance of optimization techniques and machine learning tools in addressing complex engineering

challenges in areas such as power systems, control, signal processing, and interdisciplinary research. She also provided insights into current trends and research directions in these fields, particularly in relation to graduate-level engineering research. The inaugural session was presided over by Professor M. Balasubrahmanyam, Head of the Department and FDP Coordinator, alongside Professor K. Krish-

naveni, Vice Principal (Academics), Dr. Kowsthubba, and Dr. Sankanth T, Co-Coordination of the programme. The session concluded with a vote of thanks, acknowledging the contribution of the Chief Guest, the support of the CBIT management, and the active participation of faculty members, setting the stage for an intensive and enriching learning experience over the coming days.



The inaugural function commenced with a warm welcome to the dignitaries, resource persons, and participants from various academic institutions and industries across the country. The event was graced by the **Chief Guest and Keynote Speaker, Professor Alivelu Manga P, Professor**, Department of Electrical and Electronics Engineering, and Associate Dean – Academic Graduate Studies and Research (AGSR) Division, BITS Pilani, Hyderabad Campus.

In her inaugural address, Professor Alivelu Manga emphasized the growing importance of optimization techniques and machine learning tools in solving complex engineering problems across domains such as power systems, control, signal processing, and emerging interdisciplinary areas. Professor Manga provided valuable insights into the current trends



# CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY

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

Approved by Affiliated to USC Autonomous 12 Programs Accredited by Grade A++ in All India Ranking 151-200 Band



COMMITTED TO RESEARCH, INNOVATION AND EDUCATION

# 47

years

and research directions in optimization and machine learning, particularly in the context of engineering applications and graduate research.

The inaugural session was presided over by Professor M. Balasubbareddy, Head of the Department of Electrical and Electronics Engineering and Coordinator of the programme, along with Professor K. Krishnaveni, Vice Principal (Academics), Dr. Kowsthuba, Co-Coordinator, and Dr. Sukanth T., Co-Coordinator, CBIT. The session concluded with a vote of thanks, acknowledging the esteemed presence and valuable contribution of the Chief Guest, the continued support of the management, and the enthusiastic participation of the faculty members.

## TECHNICAL SESSIONS:

The FDP was structured into three sessions per day, comprising expert lectures, demonstrations, and hands-on training.

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



The Session 2 was focused on Digital Twin applications in power systems by Prof .Alivelu Manga M.

Session 3 was an overview of Machine Learning and the role of optimization in ML, providing participants with foundational concepts and emerging trends by Dr.Jagruthi Saini.



# CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY

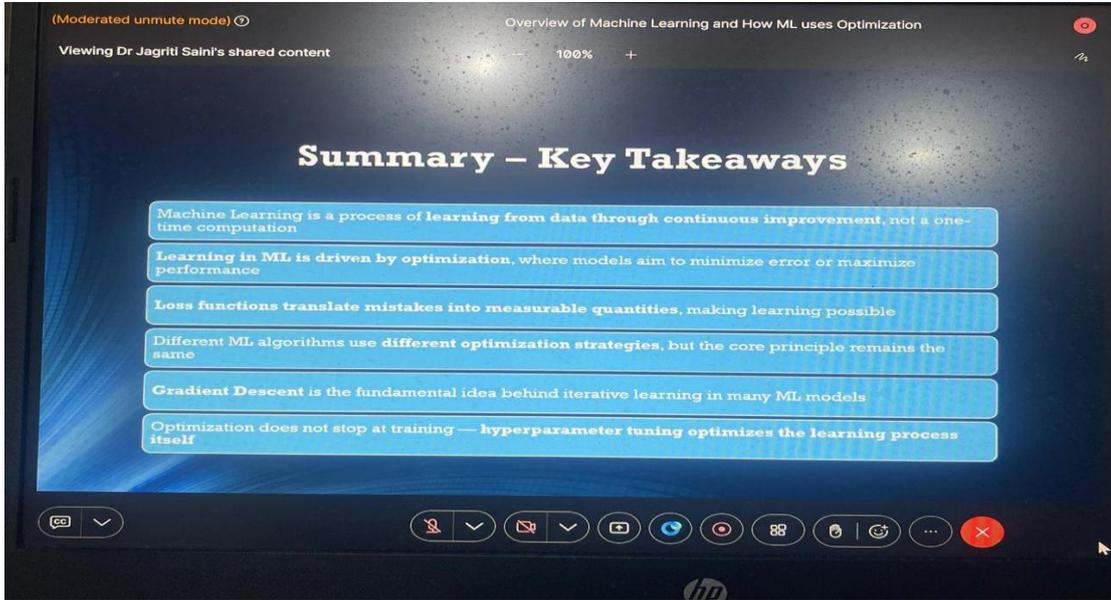
An Autonomous Institute | Affiliated to Osmania University  
Kokapet Village, Gandipet Mandal, Hyderabad, Telangana-500075, www.cb.it.ac.in



COMMITTED TO RESEARCH, INNOVATION AND EDUCATION

# 47

years





# CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY

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

Approved by  Affiliated to  USC Autonomous  12 Programs Accredited by  Grade A++ in  All India Ranking 151-200 Band 

COMMITTED TO RESEARCH, INNOVATION AND EDUCATION **47** years

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



Session 1. The participants gained practical exposure through implementation of the Cuckoo Search Algorithm in MATLAB.

Session 2. Its implementation using MATLAB.

Session 3. Machine Learning for Engineering Applications.

- **Day 3 (07/01/2026):**

Session 1. Teaching Learning Based Optimization (TLBO)

Session 2. Generative AI & Large Language Models (LLMs) for Engineering Applications



# CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY

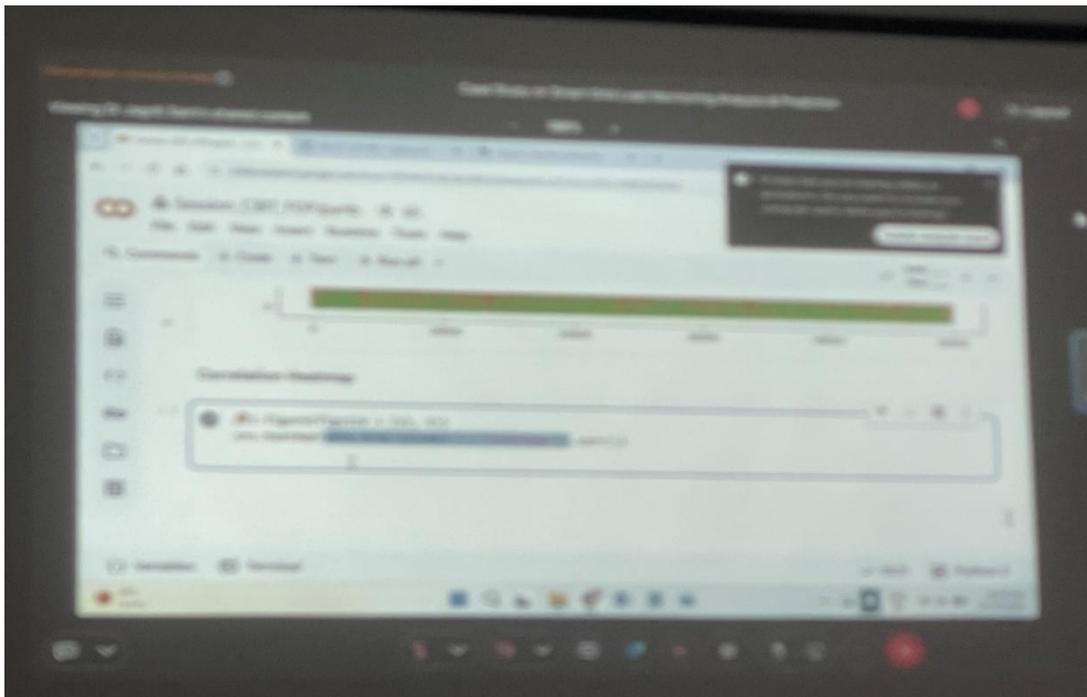
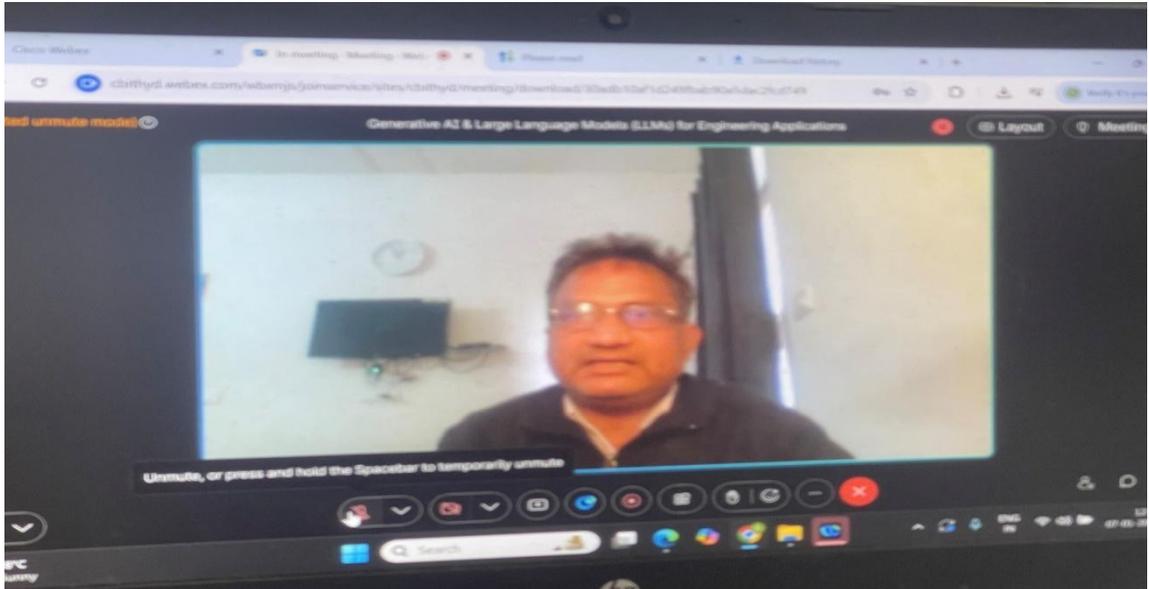
An Autonomous Institute | Affiliated to Osmania University  
Kokapet Village, Gandipet Mandal, Hyderabad, Telangana-500075, www.cbit.ac.in



COMMITTED TO RESEARCH, INNOVATION AND EDUCATION

# 47

years



Session 3. Case Study on Smart Grid Load Monitoring Analysis & Prediction



# CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY

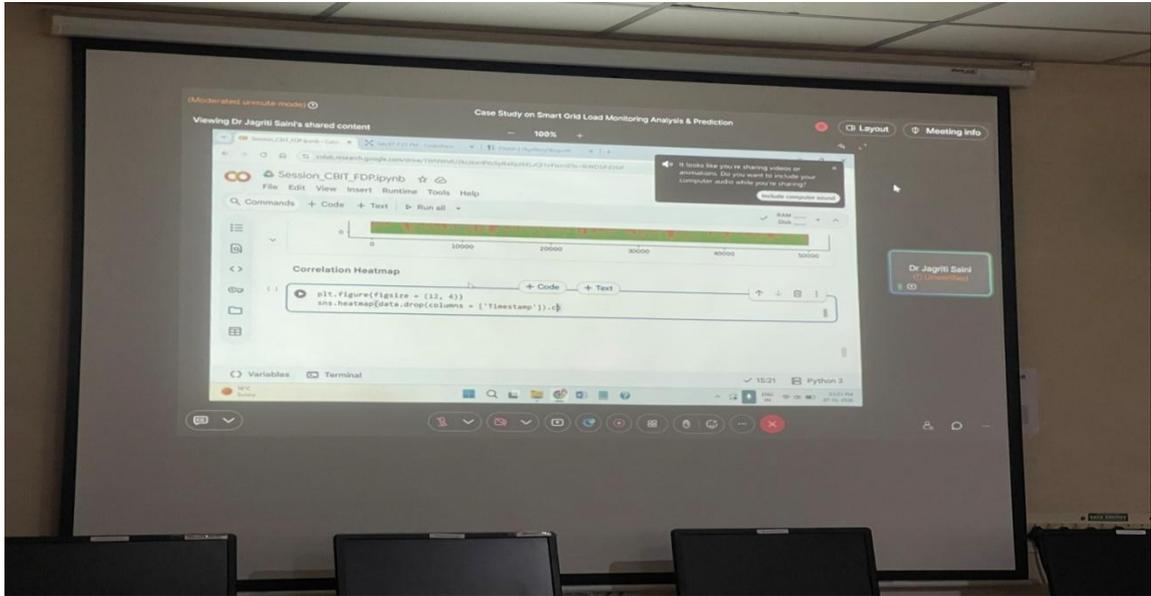
An Autonomous Institute | Affiliated to Osmania University  
Kokapet Village, Gandipet Mandal, Hyderabad, Telangana-500075, www.cbit.ac.in



COMMITTED TO RESEARCH, INNOVATION AND EDUCATION

# 47

years



- **Day 4 (08/01/2026):**

Session 1. Advanced topics such as Principal Component Analysis (PCA) using Python,

Session 2. Gen AI based Conversational Intelligence.





# CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY

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

Approved by Affiliated to USC Autonomous 12 Programs Accredited by Grade A++ in All India Ranking 151-200 Band

COMMITTED TO RESEARCH, INNOVATION AND EDUCATION **47** years



Session 3. Optimizing IoT sensor data at the edge using lightweight ML models were discussed.





# CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY

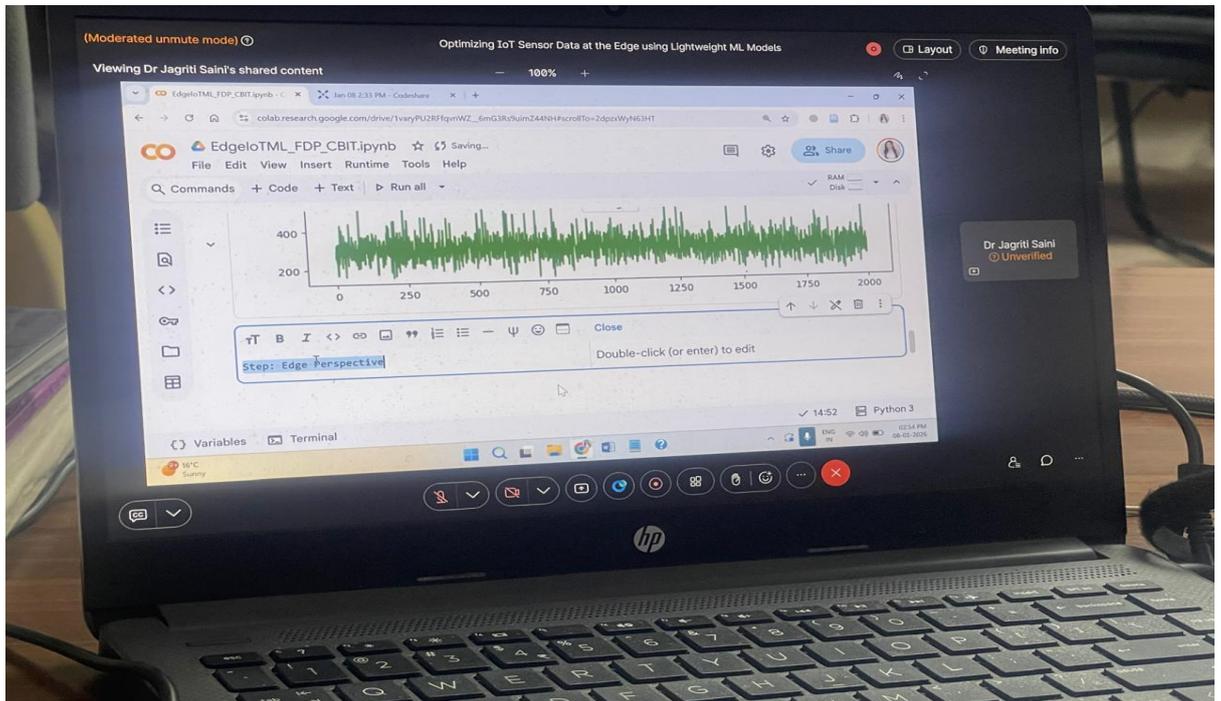
An Autonomous Institute | Affiliated to Osmania University  
Kokapet Village, Gandipet Mandal, Hyderabad, Telangana-500075, www.cbit.ac.in



COMMITTED TO RESEARCH, INNOVATION AND EDUCATION

# 47

years



- **Day 5 (09/01/2026):**  
Session 1. The final day included hands-on sessions on hyperparameter optimization of Random Forest algorithms and  
Session 2. Solar power forecasting using LSTM optimization,

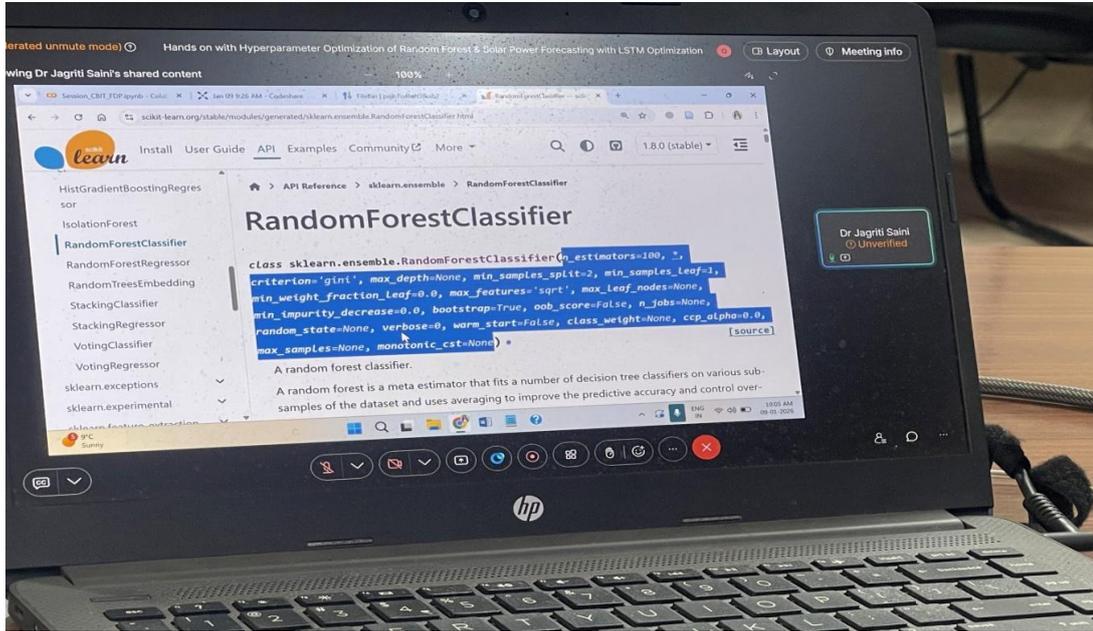


# CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY

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



**Gandipet, Telangana, India**   
Civil Block, Chaitanya Bharathi Institute Of Technology,  
Cbit Rd Number 5, Kokapet, Gandipet, Telangana  
500075, India  
Lat 17.39119° Long 78.318906°  
Friday, 09/01/2026 10:05 AM GMT +05:30

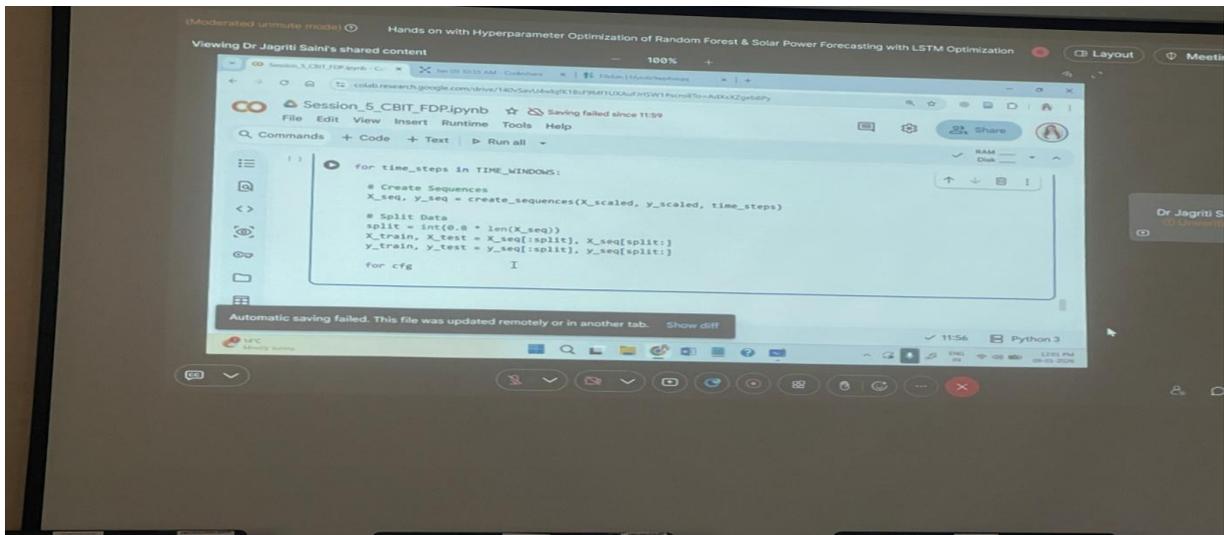


# CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY

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



### Session 3. Valedictory.

The FDP concluded with a valedictory session on 09th January 2026, presided over by Professor K. Krishnaveni, Vice Principal (Academics), and Professor M. Balasubbarreddy, Programme Coordinator. The coordinators summarized the key outcomes of the programme and emphasized the importance of integrating optimization and machine learning techniques in teaching, research, and industry-oriented projects. Participant feedback was overwhelmingly positive, appreciating the well-structured sessions, relevance of topics, and strong hands-on orientation.



# CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY

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

Approved by  Affiliated to  UGC Autonomous  12 Programs Accredited by  NAAC  Grade A++ in  All India Ranking 151-200 Band  NIRF NATIONAL INSTITUTIONAL FRAMEWORK

COMMITTED TO RESEARCH, INNOVATION AND EDUCATION **47** years



Resource Persons

The programme featured eminent academicians and industry experts, including:



# CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY

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

Approved by Affiliated to USC Autonomous 12 Programs Accredited by Grade A++ in All India Ranking 151-200 Band

COMMITTED TO RESEARCH, INNOVATION AND EDUCATION

47 years

- Prof. Alivelu Manga Parimi, Professor & AGSRD Associate Dean
- Dr. Sumit Bhardwaj, Manager – Analytics, Concentrix India
- Dr. Gaurav Kumar, Founder, Magma Research and Consultancy Services
- Dr. Jagriti Saini, Founder, Eternal RESTEM
- Dr. M. Balasubbareddy, Professor, CBIT

Their sessions were highly interactive and enriched with real-time examples, practical demonstrations, and case studies.

## PARTICIPATION AND OUTCOMES:

The FDP witnessed enthusiastic participation from faculty members and research scholars from various institutions across the country. Participants acquired practical skills in optimization algorithms, machine learning tools such as MATLAB and Python, and gained insights into current research trends like Generative AI, IoT analytics, and smart grid applications.

## CERTIFICATES:





# CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY

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

Approved by Affiliated to USC Autonomous 12 Programs Accredited by Grade A++ in All India Ranking 151-200 Band  
AICTE UGC NBA NAAC NIRF ISO

COMMITTED TO RESEARCH, INNOVATION AND EDUCATION

47 years



## CONCLUSION:

The One-Week National FDP/Workshop successfully achieved its objectives of enhancing technical knowledge and research capabilities of participants in the areas of optimization and machine learning. The programme significantly contributed to academic enrichment and encouraged participants to apply these techniques in teaching, research, and real-world engineering problems.