One WEEK ONLINE FACULTY DEVELOPMENT PROGRAMME

ON
"Machine Learning for Real Time Embedded Systems and IoT Applications"
17th October to 21st October 2023
CENTRE FOR TRAINING AND LEARNING, NIT Warangal
(Established under the PMMMNMTT Scheme, Ministry of Education, Govt. of India)
in association with
Department of Electronics and Communication Engineering
Chaitanya Bharathi Institute of Technology (Autonomous) NAAC A++

Preamble

The Centre for Training and Learning (CTL) has been established at NIT Warangal with grants from the Min. of Education, through its scheme "Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNMTT)". Under this Scheme, a separate building has been built exclusively for the CTL activities, with the state-of-art training facilities that include a studio for production and uploading of video and e-lectures on various subjects of higher education, training halls to train the faculty in various theme areas of Science and Technology, humanities and social sciences, linguistics and communication skills, pedagogy and cognition evaluation, etc. among others. One of the important objectives of the Centre is to conduct training programmes for the aspiring, newly inducted and in-service faculty in science, engineering, social sciences disciplines in higher education. Other activities of the CTL include preparation of print and e-learning materials, offering on-line courses, curriculum design, carrying out research in educational technology and pedagogy and integrating with ICT into teaching-learning process. The CTL has special programmes of training for the marginalized and women-faculty.

About the FDP:

Machine Learning Usually plays an important role in the transition from data storage to decision systems based on large databases signals such as the obtained from sensor networks, internet services, or communication systems. These systems imply developing both computational solutions and novel models. Real Time Embedded Systems and IoT: a field at the heart of science and everyday life. The notion of "RTES & IoT" might seem like something impenetrably complex, even to scientists. However, the fact is that most of them have already being doing it for a long time, albeit in an unconscious way. Acquiring, shaping and transforming data, cleaning it for the sake of improved analysis and extraction of useful information – all of this is what experimental science is about. And by adding ideas of modelling and algorithms, you can arrive at an ensemble of methods that constitutes a scientific discipline in its own right. The aim of the workshop is to contribute to the cross fertilization between the research on Machine Learning methods and their applications to Real Time Embedded Systems and IoT that includes Embedded Programming and data processing of IoT applications using machine Learning.

Major Course Contents:

- Introduction to Machine Learning (ML)
- Supervised and Unsupervised Learning Approaches
- Dimensionality reduction techniques-PCA, LDA etc.
- Introduction to Embedded Systems and its Applications
- Hardware and Software Co-design
- System on Chip
- Interfacing sensors and actuators
- Introduction to IoT cloud
- Programming on Raspberry Pi with Python
- Machine Learning for IoT application
- Research Issues and Case Studies on ML in Embedded Systems and IoT applications.
- Case Studies on IoT Applications using Python and MATLAB
- Hands-on Session for ML/DL Applications for IoT

Registration Fee Particulars:

Faculty	Rs.1000/-
Students / Research Scholars	Rs. 500/-
Industry Participants	Rs.2000/-

Participants need to pay the Registration Fee Online using the following details:-

Online Transfer Details
Account Name: **HEAD CTL NITW**
Account No: **40376545007**
IFSC: **SBIN0020149**
Bank and Branch: **SBI, NIT (REC) Warangal**

How to apply:

Participants are required to fill the online registration form by clicking on the following link:

https://forms.gle/ahGXB4ATzSNVNyce6

Selection Criteria:

Selection will be done based on first-come-first-serve to a maximum number of 50 (fifty). Additionally, 10 participants from industry are allowed to participate. The list of selected participants will be intimated through e-mail. In case the candidate is not selected, the registration amount will be refunded. Candidates will be issued certificates on successful completion of the course. Reservations are followed for selecting candidates as per GOI norms.

Important Dates:

Last date (Application & DD)	25.09.2023
Selection List by E- mail	05.10.2023
Duration	17.10.2023 to 21.10.2023

About NIT Warangal:

National Institute of Technology Warangal, formerly known as Regional Engineering College was established in 1959. Over the years it has developed into a premier institute of higher learning and is ranked among the top technical education institutions in India. There are 14 Departments offering eight undergraduate and 31 post-graduate programs besides doctoral programmes. About 5000 students across the country and about 500 international students study on the campus. It is a fully residential campus sprawling over 250 acres with excellent infrastructure in the form of state of the art library, seminar halls, guest houses and research laboratories.

About Chaitanya Bharathi Institute of Technology (Autonomous):

CBIT is one of the premier Engineering Colleges in the state of Telangana located in the serene surroundings of Gandipet Lake. Over the past 41 years this institute has become a temple of knowledge and produced about 21,000 eminent and skillful graduate and postgraduate engineers, serving all over the world. Various programmes of the college were accredited five times by NBA (AICTE) and the institute is also accredited by NAAC A++ and UGC. UGC has granted autonomous status to this institute from the academic year 2013-2014 and renewed in 2019-2020. The total constructed area is about 6.257 lakhs sq. ft, Worth about Rs. 45.00 crores spread over 50.32 acres. The grants received from AICTE/UGC/DST are worth about Rs. 4.5 crores. The college offers Nine UG and Eleven PG courses.

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1. Name :

2. Designation:

3. Institution:

4. Email:

5. Mobile No :

6. Payment Details

   Reference No:
   Amount:
   Bank:
   Date:

7. Address for Correspondence:

8. Educational Qualification:

9. Subjects taught so far:

10. No. of refresher courses/workshops attended:

11. Experience (in years)
    Teaching: Research: Industry:

Declaration

The information provided is true to the best of my knowledge. If selected, I agree to abide by the rules and regulations of the FDP and shall attend the course for the entire duration. I also undertake the responsibility to inform the coordinator in case, I am unable to attend the course.

Place:
Date: Signature of the Applicant

SPONSORSHIP CERTIFICATE

Dr. /Mr. /Ms. …………………………...................................... is an employee of our Institute/Organization and is hereby sponsored to participate in the FDP on **"Machine Learning for Real Time Embedded Systems and IoT Applications"**, sponsored by **sponsored by the Centre for Training and Learning (CTL) during** during 17th October to 21st October 2023 at **Chaitanya Bharathi Institute of Technology**, **Hyderabad**.

Signature of Head of Institution
(with seal)

Address for correspondence

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Hyderabad– 500 075 (Telangana)
Email: sivapriyankas_ece@cbit.ac.in
Ph. No: 7702229119

It is requested to all the delegates, after completion of application form, all the payment details, screenshot of the payment and scanned application form must be uploaded in the following online registration link.

https://forms.gle/ahGXB4ATzSNVNyce6

For more details about CTL of NIT Warangal, please visit:
https://nitw.ac.in/tlc

Coordinators	
Dr S Siva Priyanka **Assistant Professor,** **Department of ECE** **CBIT Hyderabad - 500075 (Telangana)** **Email:sivapriyankas_ece@cbit.ac.in** **Ph. No:7702229119**	**Prof. T. Kishore Kumar,** **Head CTL & Professor,** **Department of ECE** **NIT Warangal–506 004 (Telangana)** **Email: kishore@nitw.ac.in** **Ph. No: 8332969353**

Chief Patron	Patron	Convener
Sri. N. Subash Garu President Chaitanya Bharati Institute of Technology (A) Hyderabad - 500075 (Telangana)	Prof. C. V. Narasimhulu (Patron) Principal, Department of ECE Chaitanya Bharati Institute of Technology (A) Hyderabad - 500075 (Telangana)	Prof. D Krishna Reddy (Convener) Head ECE, Department of ECE Chaitanya Bharati Institute of Technology (A) Hyderabad - 500075 (Telangana)