



## FACULTY DEVELOPMENT PROGRAMME

on

### Machine Learning and Soft Computing Approaches for Real-time Applications (September 24<sup>th</sup> - 30<sup>th</sup> 2022)

Organized by



E & ICT Academy, NIT Warangal

(Sponsored by Ministry of Electronics and Information Technology (MeitY), GOI)

in association with

**ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT** (Autonomous)

Department of Computer Science and Engineering,  
Department of Computer Science and Engineering (AIML & DS),  
Department of Information Technology

#### Preamble:

Electronics & ICT Academy" was set up at NIT Warangal with financial assistance from MeitY, GoI. The jurisdiction of this academy is Telangana, Andhra Pradesh, Karnataka, Goa, Puduchery and Andaman & Nicobar Islands. The role of this academy role is to offer Faculty Development Programmes in standardized courses and emerging areas of Electronics, Information Communication Technologies, training & consultancy services for Industry, Curriculum development for Industry, CEP for working professionals, Advice and support for technical incubation and entrepreneurial activities.

This Faculty Development Programme (FDP) is devoted to address the need to enhance the knowledge about the latest technologies pertaining to **Machine Learning and Soft Computing Approaches for Real-time Applications** is being conducted at **AITAM, Tekkali**. The course is handled by academicians and industry experts.

#### Major Course Contents:

- Introduction to Artificial neural network, six-Types of Artificial Neural Networks Currently Being Used in Machine Learning, Feed forward neural network, Radial basis function neural network Kohonen self organizing neural network, Convolutional neural network, Modular neural network
- Applications: Handwriting recognition/signature identification, Image compression, Traveling salesman problem, prediction Stock exchange, cryptographic, Applications using ANN, Jordan network, Graph neural networks, Higher order graph; Hands on: a deep learning approach to antibiotic discovery
- Image processing, computer vision and visualization, Machine learning and pattern recognition, Neural information processing systems and brain theory, Non-linear kernel machines, support vector machines, Reinforcement learning and evolutionary computation
- Introduction: A Social History of Machine Learning.
- Table to Symbol: Structured Data, Unsupervised, Classification, and Organizations. Sequence to Symbol: Text, Entextualization, and Contextualization., Image to Symbol: Convolutional Neural Networks (CNNs), Supervised Classification, and Iconicity.
- Generative Adversarial Networks, Creative AI, and the Habitus, Sequence to Sequence: Recurrent Neural Networks (RNNs), Machine Translation, Structuralism and Poetics, Signals: Speech, Sound, and Temporality.

#### Faculty conducting this programme:

The programme will be conducted by the faculty members from NIT Warangal, and AITAM, Tekkali. Academicians in the concerned field from IITs/NITs/IIITs are invited to deliver lectures in the programme. Speakers from industries are also expected to deliver as part of the programme.

#### Eligibility:

The programme is open to the Faculty of Engineering Colleges, MCA Colleges, other allied disciplines, and Industry personnel working in the concerned /allied discipline can also attend.

#### Selection Criteria:

Selection will be done based on **first-come-first-serve** basis to a maximum number of 100. The list of selected participants will be intimated through e-mail. In case a candidate is not selected, the DD will be sent back. Candidates will be issued satisfactory certificates on successful completion of the course. Reservations are followed for selecting candidates as per GOI norms.

#### About NIT Warangal:

National Institute of Technology, Warangal is the first among 17 RECs setup as joint venture of the Government of India and the state government. Over the years the college has established itself as a premier Institute, imparting technical education of a very high standard leading to the B.Tech degrees in various branches of engineering, M.Tech. and Ph. D. programs in various specializations. All B.Tech and M.Tech programmes of NIT Warangal are NBA accredited.

#### About Aditya Institute of Technology and Management Foundation:

The Aditya Institute of Technology and Management (Autonomous) was established in 2001 under Aditya Educational Society to offer quality education in north coastal A.P. It offers B.Tech programs in ECE, CSE, IT, EEE, CE, MECH, CSM and CSD which are accredited by NBA & NAAC. It also offers postgraduate programs in MBA, and 4 disciplines of M.Tech. in Engineering. Departments of CSE, ECE, CE, ME and EEE are recognized as research centers by JNTUK Kakinada. AITAM is permanently affiliated to JNTUK Kakinada, Approved by AICTE, Recognized u/s(2)(f)&12(B), Recognized as SIRO by DSR-DIST, FIST Institution.

#### About the CSE Department:

Aditya Institute of Technology and Management (AITAM) established the department of Computer Science & Engineering (CSE) in 2001 with an initial intake of 60 students, enhanced by 30 seats in 2006-07, further enhanced by 30 seats in 2007-08, and got approval for an additional intake of another 60 seats in 2012-13 and the total intake of B. Tech program reaches 180 seats. A Post Graduate program (M. Tech) in CSE was introduced in 2008-09 with an intake of 18 seats. An additional intake of 18 seats. In 2009-10 the department of CSE was accredited by National Board of Accreditation (NBA) for three years (Cycle-1). It is an added feather to our crown. In 2012-13 the department was reaccredited by National Board of Accreditation (NBA) for another two years (cycle-2) and reaccredited by NBA for three years (cycle-3) in year 2017-18. The department of CSE feels proud to announce that this Institution has got accredited by NAAC in September, 2011 (cycle-1) and reaccredited in 2019 (cycle-2) with A+ Grade

#### About the CSE (AIML&DS) Department:

Aditya Institute of Technology and Management (AITAM) established the department of Computer Science & Engineering (Artificial Intelligence & Machine Learning) in 2021 with an initial intake of 60 students, enhanced by 60 seats in 2022-23 and the total intake of B. Tech CSE (AIML) program reaches to 120 seats in 2022-23. The prime objective of this programme B. Tech CSE (AIML) is to develop students to excel in Artificial Intelligence and Machine Learning specific areas by exposing them to understand mathematical, statistical, and computational models with engineering and scientific principles to build intelligent machines, software, applications with a cutting-edge combination of machine learning.

#### About the IT Department:

Aditya Institute of Technology and Management established the department of Information Technology (IT) in 2001 with an initial intake of 60 students and decreased to 30 seats in 2003, enhanced by 30 seats in 2009 and further enhanced by 60 seats in 2020. These two important additions surely enhance the prestige of the institution; and in turn help students to improve their academic standards. The B. Tech program was duly approved by the AICTE and Govt. of A.P. and permanently affiliated to JNTUK. The department of IT has been leaping forward with strength over the years. In 2019-20 the department of IT was accredited by National Board of Accreditation (NBA) for three years under Tire-1. It is an added feather to our crown.

#### Registration Fee and Payment details:

Faculty and Research Scholars	Rs. 750 /-
Industry Participants	Rs. 2250 /-
<b>Online payment Details:</b>	
<b>Account Name: Electronics &amp; ICT Academy</b>	
<b>NITW Account No: 62423775910</b>	
<b>IFSC: SBIN0020149</b>	

#### How to apply:

Participants are required to fill the online registration form through the following link: <https://forms.gle/Fa8bBZ2Ay7ZsnMxY9>

#### Calendar dates to Note:

Last date to submit Registration	<b>23-09-2022</b>
Selection of Applicant by E-mail	<b>23-09-2022</b>
FDP duration	<b>24 – 09 – 2022 to 30 – 09 – 2022</b>



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Machine Learning and Soft Computing Approaches for Real-time  
Applications**

**(September 24<sup>th</sup> - 30<sup>th</sup> 2022)**

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**Department of Computer Science and Engineering,  
Department of Computer Science and Engineering (AIML & DS),  
Department of Information Technology**

1. Name : Dr. /Mr. /Ms. ....
2. Designation : is an employee of our Institute/Organization and is hereby sponsored
3. Institution : to participate in the FDP on “**Machine Learning and Soft**
4. Email : **Computing Approaches for Real-time Applications**”, sponsored
5. Reference No : by Electronics & ICT Academy during *September 24<sup>th</sup> to 30<sup>th</sup> 2022*
- Bank : **at Aditya Institute of Technology and Management(A), Tekkali,**
- Date : **Srikakulam Dist, Andhra Pradesh.**
- Amount :
6. Address for Correspondence :

Signature of Head of Institution  
(With seal)

**SPONSORSHIP CERTIFICATE:**

7. Educational Qualification : Address for correspondence
8. Subjects taught so far : *Post your application form (if it becomes offline)*
9. No. of refresher courses/workshops attended: **CONVENOR**
10. Experience (in years): **Dr. Ch. Ramesh**  
**Professor & Dean (IQAC)**  
**Computer Science & Engineering,**  
**Aditya Institute of Technology and Management ,**  
**K. Kotturu, Tekkali – 532201, Srikakulam (Dist),**  
**Andhra Pradesh, India.**
11. Do you belong to SC/ST: YES / NO

*For more details about Electronics & ICT Academy, NIT, Warangal,  
please visit: <https://nitw.ac.in/eict>*

*For more enquiries please contact:*

**Dr. M. Jayanthi Rao**  
**Assistant Professor, Dept. of CSE, AITAM**  
**Mobile: +91 9885936995, 8074265300**

**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.

Signature of the Applicant

**Coordinators**

**Dr. G. Nageswara Rao**  
**Professor, Dept. of IT,**  
**Aditya Institute of Technology and Management,**  
**K. Kotturu, Tekkali – 532201, Srikakulam (Dist),**  
**Andhra Pradesh, India**

**Dr. Cheruku Ramalingaswamy**  
**Assistant Professor, Dept. of CSE**  
**National Institute of Technology,**  
**Warangal -506004, Telangana**

**Dr. M. Jayanthi Rao**  
**Assistant Professor, Dept. of CSE**  
**Aditya Institute of Technology and Management,**  
**K. Kotturu, Tekkali – 532201, Srikakulam (Dist),**  
**Andhra Pradesh, India**

**Smt. K. Sangeetha,**  
**Sr. Asst. Professor, Dept. of CSM & CSD**  
**Aditya Institute of Technology and Management,**  
**K. Kotturu, Tekkali – 532201, Srikakulam (Dist),**  
**Andhra Pradesh, India**