



**ONLINE FACULTY DEVELOPMENT PROGRAMME (FDP)**  
**ON**  
**Machine Learning in Science and Engineering: Models and Applications**  
**(27<sup>th</sup> June - 07<sup>th</sup> July 2022)**  
**E & ICT Academy, National Institute of Technology, Warangal.**  
**in association with**  
**S.A. Engineering College, Chennai- 600077**



**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, Puducherry and Andaman & Nicobar Islands. 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.

**About the FDP:**

This Online Faculty Development Programme (FDP) on "Machine Learning in Science and Engineering: Models and Applications" is being conducted for the faculty members of engineering colleges, industries and research laboratories. This FDP is suitable for faculty, researchers, post graduate scholars in academia and industry as well. The purpose of conducting this 10 - day FDP is to provide a hands-on-experience on real time applications using AI & ML methods. This FDP is devoted to address the need to enhance the knowledge about the latest technologies pertaining to Artificial Intelligence and Machine Learning. 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 course.

**Major Course Contents:**

- ✓ Introduction to AI and Machine learning,
- ✓ Overview of Machine Learning Techniques.
- ✓ Probability Distributions- Bayesian learning, decision tree based classification methods
- ✓ Dimensionality reduction methods
- ✓ Support vector machine classification and application
- ✓ Neural networks and practical implementations
- ✓ Clustering: K Means, C-Means, Agglomerative Clustering.
- ✓ Hands on to implementation of supervised and unsupervised methods
- ✓ Introduction to Deep learning methods and applications
- ✓ Machine Learning Application in Computer Vision (Example: Video Surveillance and Medical Imaging)
- ✓ Transfer Learning
- ✓ Generative Adversarial Networks
- ✓ Reinforcement Learning, Optimization and Data driven Methods
- ✓ Data Visualization with Python

**Faculty conducting this program:**

This program will be conducted in online mode by the faculty members from NIT Warangal in association with S.A. Engineering College Chennai, Tamil Nadu - 600077; Academicians in the concerned field from Indian Institute of Technology (IIT)/National Institute of Technology (NIT)/National Institute of Technical Teachers Training and Research (NITTTR)/ Self-financing/Autonomous College faculty are invited to deliver lectures in the program. Speakers from industries are also expected to deliver as part of the course.

**Eligibility:**

The program is open to faculty of Engineering Colleges and other allied disciplines in India. Industry personnel working in the concerned /allied discipline can also attend.

**Registration Fee Particulars:**

The fee is to be paid either in the form of DDs or online transfer using the following details

<b>Faculty and Research Scholars</b>	<b>Rs.500/-</b>
<b>Industry Participants</b>	<b>Rs.1500/-</b>
<b>Online Transfer Details</b>	
<b>Account Name: Electronics &amp; ICT Academy NITW</b>	
<b>IFSC: SBIN0020149</b>	
<b>Account No: 62423775910</b>	

**How to apply:**

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

<https://tinyurl.com/SA-FDP-2022>

**Selection Criteria:**

Selection will be done based on first-come-first-serve basis to a maximum number of 50 (sixty). Additionally, 10 participants from industry are allowed to participate. 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.

**Important dates:**

Last date for  
 Submission of Application: 24/06/2022  
 Selection by E-mail : 25/06/2022  
 Duration : 27/06/2022 to 07/07/2022

**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 S.A.Engineering College:**

S.A. Engineering College, an outcome of Dharma Naidu Educational & Charitable Trust was established in the year 1998. College has spacious, high infrastructure and peaceful surroundings with 5 lakhs sq.ft of constructed area. The campus comprises aesthetically designed buildings that are networked by fiber optic cables and Wi-Fi. The college maintains a high standard of education by providing a wide array of world class academic facilities, employing highly qualified and experienced faculty members and creating an ambience conducive for quality education. In recognition of quality system of high quality policy being implemented by the Institution, M/s TUV NORD has accorded ISO 9001:2008 Certification. The college is accredited by NBA and NAAC with 'A' Grade. The college offers the following 8 U.G programmes and 6 P.G programmes

