



**G.NARAYANAMMA INSTITUTE OF TECHNOLOGY &
SCIENCE (For Women)
(AUTONOMOUS)**

Shaikpet, Hyderabad – 500104

Electronics and Telematics Engineering

2021-22

**FDP on “Artificial Intelligence and Machine learning: Real Time
Applications”**

REPORT

Date: 30-09-2021

Resource persons:

1. Dr Ravi Kumar Jatoth, Associate Profesor , Dept of ECE, NITW
2. M. Vijay Kumar, Dept of ECE, NIT Warangal
3. Mr Adit, Dept of ECE, NIT Warangal
4. Dr Anil Kumar Uppala, IIIT Hyderabad
5. Sri Ayush Utkarsh, Engineer, IBM India
6. Dr M Srinivas, Asst Professor , Department of CSE, NITW
7. Dr Kadambari, Asst Professor, NITW.
8. Dr. Swagatam Das, ISI Kolkata
9. Prof M.Bhurchandi, NIT Nagpur.

About the Program:

This FDP is scheduled from 20-09-2021 to 30-09-2021 and gained the theoretical and practical knowledge in Artificial Intelligence and Machine learning, which inturn benefitted the participants to know the current research trends and carry out their research work in Artificial Intelligence and Machine learning. The diverse range of topics covered within this FDP includes: Introduction to AI and its applications in real world, Introduction about machine learning, Types of Learning algorithms Unsupervised learning methods, Partitioned and hierarchical clustering methods, Hands on to implementation of supervised and unsupervised methods, Support vector machine classification and application Neural networks and practical implementation, Introduction to Deep learning methods and applications Medical Image data processing and analysis, Hands on to implementation of Image data processing and analysis, Reinforcement Learning, Optimization and Data driven Methods, GAN.

Signature of the Faculty member

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TWO WEEK ONLINE FACULTY DEVELOPMENT PROGRAMME (FDP)
Artificial Intelligence and Machine Learning: Real Time Applications
 (20th - 30th September 2021)
 Organized by
E & ICT Academy, National Institute of Technology, Warangal.
 In association with
G. Narayanamma Institute of Technology and Science (for Women)
AUTONOMOUS, Shaikpet, Hyderabad.
 (Sponsored by Ministry of Electronics and Information Technology (MeitY), GOI)



Sample:

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 related courses and emerging areas of Electronics, Information Communication Technologies, training & consultancy services for Industry, incubation development for Industry, CIP for working professionals, Advice & support for technical incubation and entrepreneurial activities.

About the Workshop:

Technology plays a major role in day to day life activities. To drive a huge revolution of consumer, companies are relying on advance algorithms to make things easier. Artificial intelligence and Machine learning are the major technologies in recent scenario. The advancements in Machine Learning are an exemplary rise in technological industry. The Artificial Intelligence is ahead in developing a more intelligent computer system that adapts, solves and learns. This has tremendous application in industry, defense, healthcare, agriculture and many other areas. This FDP will be a platform in sharing knowledge in Artificial Intelligence & Machine Learning domains.

Course Contents:

- Introduction to AI & ML and its applications in real world
- Introduction to Python (Hands-on)
- Linear Regression
- Polynomial Regression
- Logistic Regression along with data preprocessing and feature analysis (Hands-on)
- Exploratory data analysis with Seaborn, SVM, K means clustering (Hands-on)
- Bayesian learning, decision tree based classification methods
- Dimensionality reduction methods
- Introduction to Deep learning methods and applications, CNN, RNN
- Neural networks and practical implementation
- Sentimental analysis, Dialogue systems (Hands-on)
- Vanishing gradient problem (Hands-on)
- Ensemble modeling techniques
- Reinforcement Learning, Optimization and Data driven Methods
- GAN

Faculty conducting this programme:

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

Eligibility:

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

Registration Fee Particulars:

Faculty and Research Scholars	Rs. 750/-
Industry Participants	Rs. 2250/-

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The fee is to be paid through online transfer using the following details:

Online Transfer Details
 Account Name: Electronics & ICT Academy NITW
 Account No: 62423775910
 IFSC: SHIM00010149
 Bank and Branch: State Bank of India, NIT(RTC) Warangal

How to apply:

Participants are required to fill in the Online registration form given in the below link
<https://forms.gle/2JHAE5CA9nUD7aUJ7>

Selection Criteria:

Selection will be done based on first-come-first-serve basis to maximum number of 100. Additionally 10 participants from industry are allowed to participate. The list of selected participants will be intimated through e-mail. Candidates will be issued satisfactory certificates on successful completion of the course. Reservations as followed for selecting candidates as per GOI norms.

Important dates:

Last date for Registration	16 th September, 2021
Selection List by E-mail	17 th September, 2021
Duration	20 th September - 30 th September, 2021

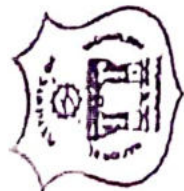
About NIT Warangal:

National Institute of Technology, Warangal is the first among 13 IITs setup as joint venture of the Government of India and the state government. Over the years the college has established itself as 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 GNITS:

G. Narayanamma Institute of Technology & Science (For Women) leading engineering college for women founded by Late Sri G. Pulla Reddy Garu in 1997, with the objective of providing excellent learning facility for women to pursue education in engineering. The institute aims to promote Technical Education among Women to enhance and build-up a new generation of thinkers, innovators and planners in the technical realm of Science & Technology. GNITS received UGC autonomous status for 10 years from 2018 and is affiliated to JNTU-II, Hyderabad. It is approved by AICTE, accredited by NAAC & NBA (AICTE). College has 202+ qualified and committed faculty members out of which 50+ are Ph.D holders. College has 8 UG courses (CSE, ECE, EEE, IT, B.Tech in Data Science, CSE & T&E) & 3 PG courses (CSE, UCE, W.Tech in Data Science, CSE & T&E) with a total intake of 910.

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Artificial Intelligence and Machine Learning : Real Time Applications

(29th - 30th Sept 2021)

Organized by E & ICT Academy, NIT Warangal

(Sponsored by Ministry of Electronics and Information Technology (MeitY), Govt. of India)

in association with

Department of ETE, G. Narayanamma Institute of Technology and Science (for Women), (AUTONOMOUS),
Shaikpet, Hyderabad



Day	Session 1 11.00 A.M - 1.00 PM		Session 2 2.00 P.M - 4.00 P.M	
	Inauguration (10.30 A.M - 11.00 A.M)	Introduction to Machine Learning and Applications Dr. J Ravi Kumar NIT Warangal	Introduction to Python M Vijay Kumar NIT Warangal	
20-09-2021				
21-09-2021		Working with Python Dr. J Ravi Kumar & M Vijay Kumar NIT Warangal	Linear Regression Dr. J Ravi Kumar & M Vijay Kumar NIT Warangal	
22-09-2021		Machine Learning Techniques: Multiple Linear Regression Dr. J Ravi Kumar & M Vijay Kumar NIT Warangal	Logistic Regression Dr. J Ravi Kumar & M Vijay Kumar NIT Warangal	
23-09-2021		Polynomial regression & K Nearest neighbor Algorithm Dr. J Ravi Kumar & M Vijay Kumar NIT Warangal	Colour Quantization using K-Means Clustering Algorithm Dr. J Ravi Kumar NIT Warangal	
24-09-2021		Support Vector Machine Dr M. Srinivas . CSE, NITW	Support Vector Machine Dr M. Srinivas . CSE, NITW	
25-09-2021		Basic Neural Network and Back Propagation using Python Dr. J Ravi Kumar & M Vijay Kumar NIT Warangal	Convolution Neural network Dr. J Ravi Kumar & Aditi NIT Warangal	
27-09-2021		Image Processing Using Python Libraries. Mr Aditi NIT Warangal	Convolution Neural network & and Character recognition using Python Dr. J Ravi Kumar & Aditi NIT Warangal	
28-09-2021		Recurrent Neural Networks Dr Kadambari, CSE, NITW	Implementation and Demonstration of Project Implementation Using Deep neural Networks Prof. Bhurchandi, NIT Nagpur	

Lunch Break

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Principal
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