TWO WEEK ONLINE FACULTY DEVELOPMENT PROGRAMME (FDP)
on
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)

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 Isls. This academy role is to offer faculty development programmes in specialized courses and emerging areas of Electronics, Information Communication Technologies, training & consultancy services for Industry, curriculum development for Industry, CEP 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 section 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.

Major 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, IITs 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/-

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

Online Transfer Details
Account Name: Electronics & ICT Academy NITW
Account No.: 62423775210
IFSC: SBIN0020149
Bank and Branch: State Bank of India, NIT(REC) Warangal

How to apply:

Participants are required to fill in the Online registration form given in the below link.
https://forms.gle/JJHBAeSCA9nUDZ4LJ7

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 followed for selecting candidates as per GOI norms

Important dates:

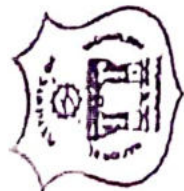|	
Last date for Registration	16th September, 2021
Selection List by E-mail	17th September, 2021
Duration	20th September - 30th September, 2021

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 GNITS:

G. Narayanamma Institute of Technology & Science (For Women), a leading engineering college in Hyderabad 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 thought innovators and planners in the technical realms of Science & Technology. GNITS received UGC autonomous status for 10 years from 2018 and is affiliated to JNTU-H, Hyderabad. It is approved by AICTE, accredited by NAAC & NBA (AICTE). College has 202 qualified and committed faculty members out of which 55 Doctorates. College has 6 UG courses (CSE, ECE, EEE, IT, IT- Data Science, CS&IT) & 5 PG courses (CSE, DECE, WMC, CNIS, PEED) with a total intake of 910

40 Hrs Online FACULTY DEVELOPMENT PROGRAMME

ON

Artificial Intelligence and Machine Learning : Real Time Applications
(20th - 30th Sept 2021)

Organized by E. & ICT Academy, NIT Warangal

Day	Session 1 11.00 A.M – 1.00 PM			Session 2 2.00 P.M – 4.00 P.M
20-09-2021	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
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 & Adit NIT Warangal
27-09-2021	Image Processing Using Python Libraries. Mr Adit NIT Warangal			Convolution Neural Network & and Character recognition using Python Dr. J Ravi Kumar & Adit NIT Warangal
28-09-2021	Recurrent Neural Networks Dr. Kadambari, CSE, NIT Warangal			Implementation and Demonstration of Project Implementation Using Deep neural Networks Prof. Bhurchandi,NIT Nagpur

Lunch Break

G. NARAYANAMMA INSTITUTE OF TECHNOLOGY & SCIENCE (For Women)
(AUTONOMOUS)
Shaikpet, Hyderabad – 500104

Department: Electronics and Telematics Engineering

2021-22

REPORT

FDP on "Artificial Intelligence and Machine Learning: Real Time Applications"

Date of Program: 20-09-2021 to 30-09-2021

Resource Person:

1. Dr Ravi Kumar Jatoth, Associate Professor, 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: I, A. Chandra Shaker, attended FDP on "Artificial Intelligence and Machine Learning: Real Time Applications" organized by G. Narayanamma Institute of Technology and Science, ETE department in association with E & ICT Academy, NIT Warangal from 20-09-2021 to 30-09-202. This FDP provided theoretical and practical knowledge on Artificial Intelligence and Machine learning. The diverse range of topics covered in this FDP includes: Introduction to AI and its applications in real world, introduction to machine learning, types of learning algorithms, unsupervised learning methods, partitioned and hierarchical clustering methods. Hands on implementation of supervised and unsupervised methods, Support vector machine classification and application of Neural Networks and practical implementation, introduction to deep learning methods and applications, medical image data processing and analysis, Hands on implementation of image data processing and analysis, reinforcement learning, optimization and data driven methods, GAN.

Signature of the Faculty Member

A. Chandra Shaker, Asst. Professor, ETE

PRINCIPAL
G. Narayanamma Institute of
Technology & Science (for women)
(AUTONOMOUS)
Shaikpet, Hyderabad - 500 104