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 Woman)
AUTONOMOUS, Shaikpet, Hyderabad
(Sponsored by Ministry of Electronics and Information Technology (MeitY), GOI)

Preamble

...ectronics & ICT Academy" was set up at NIT Warangal with financial ...stance from MeitY, GoI. The jurisdiction of this academy is Telangana, ...hra Pradesh, Karnataka, Goa, Puducherry and Andaman & Nicobar ...nds. This academy role is to offer faculty development programmes in ...andard courses and emerging areas of Electronics, Information ...munication Technologies, training & consultancy services for Industry, ...iculum development for Industry, CEP for working professionals, Advice ... support for technical incubation and entrepreneurial activities.

About the Workshop:

...chnology plays a major role in day to day life activities. To drive a huge ...tion of consumer, companies are relying on advance algorithms to make ... easier. Artificial intelligence and Machine learning are the major ...nologies in recent scenario. The advancements in Machine Learning ...ate an exemplary rise in technological industry. The Artificial Intelligence ...es ahead in developing a more intelligent computer system that adapts, ...olves and learns. This has tremendous application in industry, defense, ...althcare, agriculture and many other areas. This FDP will be a platform in ...aring 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:

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

Eligibility:

...he programme is open to faculty of Engineering Colleges, MCA Colleges ...nd other allied disciplines in India. Industry personnel working in the ...oncerned /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: 62421775910
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/J1BAgSCA9nUDZq517

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 ... intimated through e-mail. Candidates will be issued satisfactor... 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 ... RECs setup as joint venture of the Government of India and the sta... government. Over the years the college has established itself as ... premier Institute imparting technical education of a very high standa... leading to the B Tech degrees in various branches of engineer... M Tech and Ph D programs in various specializations. All B Te... and M Tech programmes of NIT Warangal are NBA accredited.

About GNITS:

G Narayanamma Institute of Technology & Science (For Women), ... leading engineering college in Hyderabad for women founded by La... Sri G Pulla Reddy Garu in 1997, with the objective of providing ... excellent learning facility for women to pursue educatio... engineering. The institute aims to promote Technical Educatio... among Women to enhance and build-up a new generation of thinke... innovators and planners in the technical realms of Science ... Technology. GNITS received UGC autonomous status for 10 yea... from 2018 and is affiliated to JNTU-H, Hyderabad. It is approved ... AICTE, accredited by NAAC & NBA (AICTE). College has 202 ... qualified and committed faculty members out of which 59 ... Doctorates. College has 8 UG courses (CSE, ECE, EEE, IT, E.T... AI&ML, Data Science, CS&T) & 5 PG courses (CSE, DECE, WM... VLSI, PEED) with a total intake of 930.

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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		Lunch Break	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, NITW			Implementation and Demonstration of Project Implementation Using Deep neural Networks Prof. Bhurchandi,NIT Nagpur

ELECTRONICS & ICT ACADEMY

NATIONAL INSTITUTE OF TECHNOLOGY WARANGAL, (T.S.), INDIA

and

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

Participation Certificate

This is to certify that **M. MADHURI LATHA**, ASSISTANT PROFESSOR

from **G.NARAYANAMMA INSTITUTE OF TECHNOLOGY & SCIENCE (FOR WOMEN)**

has participated in a 40-hour Online Faculty Development Programme on "ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING: REAL TIME APPLICATIONS" Sponsored by Ministry of Electronics and Information Technology (MeitY) GoI, organised by E&ICT Academy, NIT Warangal and G. Narayanamma Institute of Technology and Science (for Women), Shaikpet, Hyderabad during 20th - 30th September, 2021.

She / He has successfully completed all the requirements for the completion of the programme.

Dr. A. Naveena
Coordinator
GNITS, Hyderabad

Dr. J. Ravi Kumar
Coordinator
NIT, Warangal

Dr. K. Ramesh Reddy
Principal
GNITS, Hyderabad

Prof. R.B.V. Subramaanyam
Chief Investigator
E&ICT Academy, NIT Warangal

Prof. N.V. Ramana Rao
Director
NIT, Warangal

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Name of the Cell: FDP
Academic year:2021-2022
Name of the program:FDP on "AI & ML:Real Time Applications "
Dates:20.09.21 to 30.09.21

Report of
Two Week Workshop on "AI & ML : Real Time Applications"
(20.09.2021-30.09.2021)
Venue: Online

The FDP on AI & ML: Real Time Applications was conducted with a motto to explore latest how to use AI & ML techniques for the different applications and how the performance can be improved.

DAY1 Dr. J. Ravi Kumar from NITW gave a key note address on Introduction to machine learning and application. In the afternoon M. Vijay Kumar, NITW gave a lecture on introduction to python.

DAY2 Dr. J. Ravi Kumar & M. Vijay Kumar presented a talk on working with python and in the afternoon on linear regression.

DAY3 Dr. J. Ravi Kumar & M. Vijay Kumar presented a talk on multiple linear regression and in the afternoon on logistic regression regression.

DAY4 Dr. J. Ravi Kumar & M. Vijay Kumar presented a talk on working with poynomial regression & KNN and in the afternoon on K-means clustering.

DAY5 Dr. M. Srinivas presented a talk on SVM.

DAY6 Dr. J. Ravi Kumar & M. Vijay Kumar presented a talk on basic NN with python and in the afternoon on CNN.

DAY7 Mr. Adit, NITW presented a talk on Image Processing using python and Dr. J. Ravi Kumar & M. Vijay Kumar presented in the afternoon on CNN using python.

DAY8 Dr. Kadambari, NITW presented a talk on basic RNN and in the afternoon Prof. Bhurchandi, NIT Nagpur on implementation of DNN.

DAY9 Dr. J. Ravi Kumar & M. Vijay Kumar presented on optimization and data driven methods.

DAY10 Dr. J. Ravi Kumar & M. Vijay Kumar presented on GANs and valedictory.

Outcomes of the program are
1.Expected to promote awareness on AI & ML in different areas of applications.
2. Wider understanding on implementing different algorithms for given applications.
The FDP was concluded with an exam assessment, feedback session and valedictory function.

Dr.B.Venkateshulu
PROF&HOD-ECE

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M. Madhuri Latha
Asst. Prof, Dept of ECE
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