



FACULTY DEVELOPMENT PROGRAMME (FDP) ON  
**FRONTIERS IN MACHINE INTELLIGENCE  
 AND SOFT COMPUTING**  
 (10-15 June 2019)



**REVA  
 UNIVERSITY**  
 Bengaluru, India

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Organized by : School of Computing and Information Technology

In Association with E & ICT Academy, National Institute of Technology, Warangal (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 states, Puducherry and Andaman & Nicobar Islands UTs. Role of the academy is to offer faculty development program in standard 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 Workshop:**

The vision of this FDP is to enhance the quality of education imparted in institutions by providing faculty members with a platform to learn all about Machine Intelligence and Soft Computing techniques and their applications. Educators will get to learn the best practices in these domains so that they can teach the future workforce the required skill sets. This workshop creates a platform for industry professionals to enhance their knowledge base with regard to topics covered during the workshop and in turn apply the techniques in design and development of applications.

**Major Course Contents:**

- Introduction to Machine Learning
- Supervised/Unsupervised/Semi-supervised Learning
- Decision tree learning
- Linear regression, Logistic regression
- Instance based learning
- Bayesian learning
- Reinforcement Learning
- Support Vector Machine
- Neural Networks, Perceptron, Back Propagation Algorithms
- Genetic Algorithms
- Fuzzy Logic, Fuzzy C Means Clustering, Rough k means Clustering
- Feature Selection / Extraction, Dimensionality Reduction, Principal Component Analysis
- Deep Learning, Extreme Learning
- Python for Machine Learning
- Hands-on session using Python

**Resource persons:**

The programme will be conducted by the faculty members from NIT Warangal. Academicians from IITs / NITs / IIITs in concerned field are invited to deliver lectures. Speakers from industries are also expecting to deliver lectures.

**Eligibility:**

The programme is open to the teachers of Engineering Colleges. Industry personnel working in the concerned /allied discipline can also attend.

**Important Dates:**

Last date for submission of application	27 May, 2019
Selection-list intimation/display before	1st June, 2019
Duration of the program	10th-15th June, 2019

**Registration fee for Participants:**

Faculty and Research Scholars	Rs. 2500/-
Faculty of SC/ST Category	Rs. 1875/- (should submit Caste Certificate to claim concession)
Industry Participants	Rs. 7500/-

SC/ST concession is only for faculty. Research scholars are not eligible for SC/ST concession. The fee is to be paid either in the form of DDs or online transfer using the following details.

DD Details	Online Transfer Details
Demand draft in favor of "E & ICT Academy, NIT Warangal" payable at any bank in Warangal	Account Name: Electronics & ICT Academy NITW
	Account No: 62423775910
	IFSC: SBIN0020149

**How to Apply:**

A filled-in form of application in the prescribed format duly signed and sponsored by appropriate authorities (along with DD/NEFT Receipt) should reach the coordinator at the host institute by speed post. It is also mandatory to send a scanned application form and DD/NEFT receipt through e-mail to [miscfdp@reva.edu.in](mailto:miscfdp@reva.edu.in) as selection will be intimated only through e-mail.

**Selection Criteria:**

Selection will be done based on first-cum-first-serve Basis and the confirmed candidates will be notified immediately. The maximum number of participants will be 50 (fifty). Additionally 10 participants from industry are allowed to participate. The list of selected participants will be sent to their personal email ids. In case of a candidate is not selected, the demand draft will be sent back. A test will be conducted at the end of the course. Candidates will be issued a satisfactory certificates on successful completion of the course. Reservations are followed for selecting candidates as per GOI norms.

**Accommodation:**

Free Accommodation/boarding will be provided for the all participants by the host Institute. No TA/DA will be paid to the participants.

**About NIT, Warangal:**

National Institute of technology (formerly Regional Engineering College), Warangal is the first among the 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 institution 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., programs of NIT Warangal are NBA accredited.

**About REVA University:**

REVA University has been established under the REVA University Act, 2012. The University is located in Bengaluru on a sprawling green campus, spread over 45 acres of land, built with state-of-the-art infrastructure creating an environment conducive to higher learning and research. The founders of REVA University believe in the motto 'Knowledge is Power'. Driven with a philanthropic vision and a missionary zeal, the campus is built to transform students into outstanding citizens. The University prides itself in contributing to every student's holistic development. The University currently offers 24 Full-time Post Graduate Programs, 5 Part-time Post Graduate programs, 21 Graduate programs, several Certificate/Diploma and Post graduate Diploma programs in Engineering, Architecture, Science & Technology, Commerce, Management Studies, Law, Arts & Humanities and Performing Arts. Above All, the University facilitates Research leading to Doctoral Degrees in all disciplines. The programs offered by REVA University are well planned and designed based on in depth analysis and research with emphasis on knowledge assimilation, practical applications, hands-on training, global and Industrial relevance and their social significance.

**About the School:**

The School of Computing and Information Technology, is headed by an eminent professor and supported by well qualified and experienced faculty members. The school has the state-of-the-art class rooms and advanced computer laboratories. The School offers M. Tech in Computer Science & Engineering, M. Tech in Data Science & Cloud Computing, M. Tech in Advanced Information Technology and M. Tech in Computer Network Engineering and B. Tech in Computer Science & Engineering. The curriculum of both graduate and post graduate degree programs have been designed to bridge the gap between industry – academia and hence they are industry oriented. These programs provide ample scope to enter into a wide range of business opportunities. This is reflected in various core subjects offered within the program.

**Coordinators:**

<b>Dr. R. B. V. Subramanyam</b> , Professor and Head, Dept. of CSE, NIT Warangal, Ph: 9491346969 Email: <a href="mailto:rbvs66@nitw.ac.in">rbvs66@nitw.ac.in</a>	<b>Prof. M. Mallikarjuna</b> , Sr. Associate Professor, School of C & IT, REVA University, Bengaluru Ph: 9448949940 Email: <a href="mailto:miscfdp@reva.edu.in">miscfdp@reva.edu.in</a>	<b>Dr. Mylara Reddy C.</b> Associate Professor, School of C & IT, REVA University, Bengaluru Ph: 9880690824 Email: <a href="mailto:miscfdp@reva.edu.in">miscfdp@reva.edu.in</a>
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**G.NARAYANAMMA INSTITUTE OF TECHNOLOGY & SCIENCE**  
**Autonomous (For Women)**

Brief report on the workshop "Frontiers in Machine Intelligence and soft computing" conducted from 10<sup>th</sup> – 15<sup>th</sup> Jun, 2019 organized by Electronics & ICT Academy National Institute of Technology, Warangal ( Sponsored by Ministry of Electronics and Information Technology (MeitY),GOI) at REVA University, Bengaluru .

During the 6-day workshop various resource persons from academia and industry shed their knowledge and hands on expertise on Machine Learning Techniques, soft computing and its applications.

**Day-1:**

**Forenoon.** Inaugural Function, First session was taken by Prof RBV Subramanyam, Head, Dept. of CSE ,NIT Warangal on "Introduction to ML. " also focused on supervised and unsupervised Learning.

**Afternoon.** second session Taken by Prof RBV Subramanyam, Head, Dept. of CSE, NIT Warangal. Continued session on classification Methods and clustering.

**Day 2:**

**Forenoon.** First session was given by Prof RBV Subramanyam, Head, Dept. of CSE, NIT Warangal on Dimensionality Reduction, PCA.

**Afternoon.** second session was given by Prof RBV Subramanyam, Head, Dept. of CSE, NIT Warangal Demo on data Modeling, Fuzzy sets and systems.


**Day 3:**

**Forenoon.** Morning Session on "Introduction to Artificial Neural Networks " was given by Mr. M.Srinivas from IIT H - he explained convolution Neural Network and Multilayered perceptron.

**Afternoon.** Practical session on different soft ware's required for python by Mr. M.Srinivas from IIT H. He also explained about Numpy, Scipy, and Jupyter Notebook.

**Day 4:**

**Forenoon.** First session on "Basics of Tensorflow and Keras, Deep Learning with Tensorflow and Keras" was taken by Mr. M.Srinivas from IIT H. Open discussion on "Deep Learning approach for Image classification using Tensorflow".

  
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Shaikpet, Hyderabad - 500 104

**Afternoon.** Practical session on “Image segmentation with Neural Networks using Tensorflow and Image classification with Convolutional Neural Networks in Keras(Deep Learning approach)” by Mr. M.Srinivas from IIT H.

**Day 5:**

**Forenoon.** Morning Session on “Soft Computing and Rough Sets” by Prof.C R Rao from Hyderabad Central University.

**Afternoon.** Afternoon session on “Applications to ML “ by Prof.C R Rao from HCU. He also focused on Importance of Data Analysis.


**Day 6:**

**Forenoon,** First session on “NLP Introduction and why NLP for Indian Languages” was taken by Dr.M. Anand Kumar, NIT Surathkal.

**Afternoon,** Second session “word representation for Deep Learning , recent research Directions in NLP and Social Media” on Further discussion on topics covered was done along with valedictory.

**Workshop Participants:**

1. Mrs.Ch. Swathi, Asst. Professor,CSE

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

  
HOD CSE