



## FACULTY DEVELOPMENT PROGRAMME (FDP)

ON

### MACHINE LEARNING WITH PYTHON

(26<sup>th</sup> NOV 2018 to 1<sup>st</sup> DEC 2018)

Organized by

**E & ICT ACADEMY, NIT Warangal**

And

**Swami Vivekananda Institute of Technology, Secunderabad**

(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 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. This faculty development programme (FDP) is devoted to fundamental theory, recent developments and research outcomes addressing the related theoretical and practical aspects of Machine learning algorithms.

**Major Course Contents:** Machine Learning describes algorithms for writing computer programs that automatically improve their performance with experience.

- Basic Machine Learning concepts and examples.
- Nearest-neighbor algorithms.
- Support vector machines.
- Kernel methods.
- Decision trees.
- Ensemble methods (Boosting, Bagging).
- Logistic regression.
- Multi-class classification (conditional maxent models, binary classifiers and error- correction codes).
- Regression (linear regression, kernel ridge regression, lasso, neural networks).
- Unsupervised learning methods, sparse representation and dictionary learning, dimensionality reduction, neural networks, introduction to deep learning, CNN.
- Clustering (K-means, DT clustering). Dimensionality reduction (PCA, KPCA).
- Introduction to reinforcement learning. An insight on deep learning algorithms.
- Various applications in imaging and video analytics

#### Faculty conducting this programme:

The programme will be conducted by the faculty members from **NIT Warangal**. Academicians in the concerned field from **Reputed Institutes** 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 the teachers of engineering colleges, MCA colleges and other allied disciplines in Telangana, Andhra Pradesh, Karnataka, Goa, Puducherry and Andaman & Nicobar Islands. Industry personnel working in the concerned/allied discipline can also attend.

#### Registration Fee Particulars:

- **Faculty and Research Scholars: Rs 2500/- Only**
- **Industry participants: Rs 7500/-Only**
- **Faculty of SC/ST category: Rs 1875/- Only**

The participants need to send a crossed demand draft (DD) drawn in favour of "Director, NIT Warangal" and payable at SBI, NIT Warangal branch.

#### How to apply:

A filled in form of application in the prescribed format duly signed and sponsored by appropriate authorities (along with demand draft) should reach the coordinator by speed-post. It is also mandatory to send scanned application form and demand draft through e-mail to [hod.cse@jits.ac.in](mailto:hod.cse@jits.ac.in) as selection will be intimated only through 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 notified in the institute web site [www.nitw.ac.in/eict](http://www.nitw.ac.in/eict) and also will be sent to their personal e-mail ids. In case 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 certificates on successful completion of the course along with grade. Reservations are followed for selecting candidates as per GOI norms.

#### Important dates:

Last date for submission of application: 25/11/2018

Selection-list intimation/display before: 26/11/2018

Duration of Program: 26<sup>th</sup> NOV – 1<sup>st</sup> DEC 2018

#### About the Institutes:

National Institute of Technology (formerly Regional Engineering College), 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 Institution imparting technical education of a very high standard leading to the B.Tech degrees in various branches of engineering and M.Tech. and Ph.D programs in various specializations.

The Department of Computer Science and Engineering (CSE) offers B.Tech. course in CSE, M.Tech courses in CSE, Information Security (IS) and Master of Computer Applications (MCA). The Department has experienced faculty with good publications and well-established laboratories. The Department has liaison with reputed industries and R&D organizations like Microsoft, IBM, Oracle, Accenture, Infosys, TCS, EMC2, C-DAC, Motorola, NIC, Sun Micro Systems, SPSS and tie up with IISc in certain areas. Department conducts various sponsored programmes throughout the year.

## **FORMAT OF APPLICATION**

Electronics and ICT Academy, NIT Warangal

and

**Swami Vivekananda Institute of Technology , Secunderabad**

Faculty Development Programme

on

**MACHINE LEARNING WITH PYTHON**

**(26<sup>th</sup> NOV 2018 to 1<sup>st</sup> DEC 2018)**

1. Name :

2. Designation :

3. Institution :

4. E-mail :

5. Mobile No. :

6. DD No :

Bank: Date:

7. Address for Correspondence

8. Educational Qualifications with specialization:

9. Subjects taught so far:

10. No. of refresher  
courses/workshops attended:

11. Experience (in years)  
Teaching : Research  
: Industry :

12. Do you belong to SC/ST: YES/NO

### **Declaration**

The information provided is true to the best of my knowledge. If selected, I agree to abide by the rules and regulations of the FDP and shall attend the course for the entire duration. I also undertake the responsibility to inform the Coordinator in case, I am unable to attend the course.

Place:

Date:

Signature of the applicant

### **SPONSORSHIP CERTIFICATE**

Dr/Mr/Ms. ....  
is an employee of our Institute/Organization  
and is hereby sponsored to participate in the  
FDP on "Machine Learning with Python"  
sponsored by **Electronics & ICT Academy**  
during **26<sup>th</sup> NOV-1<sup>st</sup> DEC 2018** at **Swami  
Vivekananda Institute of Technology,  
Secunderabad** , *Telangana State, India.*

Place:

Date: Signature of Head of Institution

(with seal)

### **Address for correspondence:**

*Post your application form with DD to*

### **DR RAJU BHUKYA**

Assistant Professor  
Department of CSE  
National Institute of Technology  
Warangal, 506004.  
Telangana, India.

*Mail the scanned copies of filled-in and  
duly signed application form with DD to  
drrajunitw@gmail.com, raju@nitw.ac.in,*

For more information visit:

<http://nitw.ac.in/eict/>

For any enquiry contact:

Mobile:7989299553,8897436971,9700553922

E-mail: bsnaik546@gmail.com, raju@nitw.ac.in

### **Coordinators**

**Dr. Raju Bhukya**

Assistant Professor

Dept. of Computer Science and Engineering

NIT Warangal

**Mr.Shankar Nayak Bhukya**

Assistant Professor

Dept. of Information Technology

SVIT Secunderabad

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