



## FACULTY DEVELOPMENT PROGRAMME (FDP) ON

### Machine Learning Using Python

(29<sup>th</sup> Nov 2018 to 5<sup>th</sup> Dec 2018)

Organised by

Department of Information Technology

Vasavi College of Engineering (Autonomous), Hyderabad

in association with NIT, Warangal.

Under the scheme of Electronics & ICT Academy

(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, Govt. of India (GoI). The jurisdiction of this academy is Telangana, Andhra Pradesh, Karnataka, Goa and Puducherry states and UT of 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.

#### About the Workshop:

The proposed FDP introduces concepts of Python and Machine Learning. It covers an overview of Machine Learning algorithms and their applications. The training comprises of a series of lectures and practical exercises. The participants obtain deep insights of machine learning, which in turn helps them to apply it in practice or as a foundation to a deeper study in this area.

#### Major Course Contents:

- Python programming: Introduction
  - Mutable and Immutable
  - Introduction to basic (native) data structure
  - Difference between list and array
- Analytics around / using Python
  - Numpy / Pandas / Scipy / Matplotlib
  - Vector and array manipulation
  - Plotting, functions, input and output
  - Hands on session using Python
- Machine Learning: Introduction
  - Supervised Vs Unsupervised Learning
  - Linear Regression, • Decision Trees, KNN
  - Multilayer Neural Network, Back propagation
  - Bayesian Networks, SVM
  - Clustering :K Means
  - Python API's for implementing Machine Learning Algorithms
  - Case Studies using Python

#### Course Evaluation:

Continuous assessments at logical intervals. Assessment includes MCQ's, Fill in the Blanks, True/False and/or scenario based questions.

#### Faculty conducting this programme:

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

#### 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. 2500/-
Faculty of SC/ST Category	Rs. 1875/- (SC/ ST participants should submit the copy of their caste certificate to claim the concession along with application form)
Industry Participants	Rs. 7500/-

SC/ST concession is only for faculty on first-come-first-give-concession. Research Scholars are not eligible for SC/ST concession.

#### Payment:

The registration fee should be paid in the form of DDs/online transfer using the following details:

DD Details	Online Transfer Details
Demand Draft in favor of	Account Name: Electronics & ICT
"Director, NIT Warangal"	Academy NITW Account No:
payable at NIT Warangal	62423775910 and IFSC:
	SBIN0020149

#### Travel and Accommodation:

All the selected participants will have to make their own arrangements for their accommodation. No TA will be paid for the participants. Working Lunch, Tea & Snacks would be provided during the Training in the campus.

#### 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 [hodit@staff.vce.ac.in](mailto:hodit@staff.vce.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](http://www.nitw.ac.in) 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. Candidates will be issued satisfactory certificates on successful completion of the course. Reservations are followed for selecting candidates as per GOI norms.

#### Important Dates:

Last date (Application & DD)	20-11-2018
Selection List by E- mail	23-11-2018
Duration of program	29-11-2018 to 05-12-2018

#### About the Institutes:

**National Institute of Technology** (formerly Regional Engineering College), Warangal is an Institute of National Importance and fully funded by MHRD, Govt. of India. It offers various programmes B.Tech. In eight branches, PG and M.Tech. Programmes and also Ph.D. programmes. Further, the institute organizes FDPs, Workshops and Conferences on cutting-edge technologies regularly throughout the year. All B.Tech and M.Tech programmes of NIT Warangal are NBA accredited.

**VCE:** Founded in 1981 by Vasavi Academy of Education, Vasavi College of Engineering (VCE) represents a rich tradition of excellence in technology-based education. A premier-league institution among the affiliates of Osmania University, VCE owes its vision to Sri Pendekanti Venkata Subbaiah, a veteran statesman of Independent India. VCE has been conferred with Autonomous Status by the University Grants Commission (UGC), New Delhi and Osmania University, Hyderabad for a period of six years with effect from the Academic Year 2014-15, for all the UG and PG Programmes. The College is implementing Choice Based Credit System (CBCS). The Department of Information Technology was established in the year 2000. The department offers a 4-year B.E Degree programme in Information Technology, with an annual intake of 120 students, with specific emphasis on emerging technologies and empirical mode of learning. The Department was re-accredited by NBA from 2017-20.

National Institute of Technology  
Warangal  
(Autonomous)  
Hyderabad





**ELECTRONICS AND ICT ACADEMY, NIT WARANGAL**  
**And**  
**DEPARTMENT OF INFORMATION TECHNOLOGY**  
**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS), HYDERABAD**  
**Faculty Development Programme on**  
**Machine Learning using Python**  
**(29<sup>th</sup> Nov 2018 to 5<sup>th</sup> Dec 2018)**



**APPLICATION FORM**

1. Name:
2. Designation:
3. Institution:
4. E-mail:
5. Mobile No.:
6. Mode of Payment : DD ☐ Online Transfer ☐
7. If DD  
DD No.:
- Bank: Date :
8. If Online Transfer  
NEFT /  
UTR No.:
- Bank: Date
9. Address for Correspondence:
10. Educational Qualifications with specialization:
11. Subjects taught so far:
12. No. of refresher courses/workshops attended:
13. Experience (in years):  
Teaching:  
Research:  
Industry:
14. Do you belong to SC/ST: YES / NO  
If Yes  

SC	
ST	

  
(Please submit the copy of caste certificate to claim the concession)

**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 using Python** sponsored by Electronics & ICT Academy during 29<sup>th</sup> Nov 2018 to 5<sup>th</sup> Dec 2018 Vasavi College of Engineering, Ibrahimbagh, Hyderabad-500031.

Place:

Date:

Signature of Head of Institution  
(with seal)

**Address for correspondence:**

*Post your application form with DD to*

**Dr. K. Ram Mohan Rao, Assoc. Prof. & HOD**

Department of Information Technology,  
Vasavi College of Engineering (Autonomous)  
Ibrahimbagh, Hyderabad - 500031, Telangana, India.

*Mail the scanned copies of filled-in and duly signed application form with DD to [hodit@staff.vce.ac.in](mailto:hodit@staff.vce.ac.in)*

**For more information visit: <http://nitw.ac.in/eict/>**

**For any enquiry contact:**

**Mobile : 8008527776 / 9618258122**

**Land line : 040-23146050**

**Coordinators**

**Prof. D V L N Somayajulu (Coordinator)**  
**Chair, E & ICT and Professor**  
Dept. of Computer Science and Engineering NIT  
Warangal -506004

**Mrs. D R L Prasanna**  
Dept. of Information Technology,  
Vasavi College of Engineering  
Ibrahimbagh, Hyderabad-500031, TS.  
(AUTONOMOUS)  
**Shalkpet, Hyderabad - 500 104**



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

**Shaikpet, Hyderabad – 500104**

**Department: Electronics and Telematics Engineering**

**2018-19**

**REPORT**

**FDP on “Machine Learning using Python”**

**Date of Program: 29-11-2018 to 05-12-2018**

**Resource Person:**

1. Mr. Saya Sreenivasulu, Freelance Senior Technical Architect
2. Dr. B Nagesh Bhattu, Assistant Professor, Department of Computer Science, NIT Tadepalligudem
3. Mr. Anup Kelkar, Experienced Chief Information Officer
4. Mr. Surya Putchala, , CEO ZettaMine

**About the Program:** I, A. Chandra Shaker, attended FDP on “Machine Learning using Python” organized by Vasavi College of Engineering, IT department in association with E&ICT Academy, NIT Warangal from 29-11-2018 to 05-12-2018. This FDP covered a range of topics starting from basics to advanced features of Python language. FDP covered the concepts of Machine Learning models like supervised learning and unsupervised learning. Hands-on session on Python and Machine Learning models helped in implementing Machine Learning models using Python. FDP also provided insights on Deep Learning models.

**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.