MHRD
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Ministry of Human Resource Development

मदन मोहन मालवीय

शिवाजी विद्यापीठ कोल्हापूर ज्ञानमेवामृतम्

Dr. Vithalrao Vikhe Patil Foundation
Ahmednagar

Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNMTT)

Faculty Development Programme in Data Science & Machine Learning

for

Faculty in Universities, Colleges and Institutes of Higher Education

(10th – 15th October 2019)

Call for Registration and Participation

Venue: Dr. Vithalrao Vikhe Patil Foundation's
Dr. Vithalrao Vikhe Patil College of Engineering
PO MIDC, Vadgaon Gupta, Vilad Ghat, Maharashtra 414111

Jointly Organized by

Shivaji University, Kolhapur

and

Dr. Vithalrao Vikhe Patil Foundation's

Dr. Vithalrao Vikhe Patil College of Engineering, Ahmednagar

VIKHE PATIL COLLEGE OF ENGINEERING Ahmednagar

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Dr. Vithalrao Vikhe Patil
College of Engineering
Ahmednagar

About Shivaji University, Kolhapur

Shivaji University, established in 1962, is named after the Great Maratha Warrior and founder of the Maratha Empire Chhatrapati Shivaji. One of the major objectives behind foundation of this University was to cater to the regional needs of South Maharashtra. The jurisdiction of the University is spread over three districts viz. Kolhapur, Sangli and Satara with strength of about 3,00,000 students studying in 280 affiliated colleges and recognized institutes. The recent phase of the University can be termed as "a pursuit of academic excellence". Since last 4-5 years, several attempts are being made to overcome the image of University as a regional University. The University's efforts towards excellence are being recognized by the substantial grants received from funding agencies like UGC, DST, DBT etc. Another indicator of recognition of University is collaborations with premier institutes in the country. Shivaji University has recently signed MOU with Bhabha Atomic Research Centre, Mumbai for research in Material Science. It has also joined hands with Indian Institute of Geo-Magnetism, Mumbai and industries like Phyto-Pharma. Prestigious institutes like Maharashtra Police Academy, Nashik and Centre for Social Studies, Surat have sought affiliation with the Shivaji University. Shivaji University has been re-accredited by National Assessment and Accreditation Council (NAAC) Bangalore, with "A" Grade (CGPA-3.16) (2014). Shivaji University has bagged the 28th position in the rankings announced by the National Institutional Ranking Framework (NIRF) of Union Ministry of Human Resource Development (MHRD). As per the INFLIBNET report, Shivaji University stands second in use of Nature publications Group's (NPG) e-journal usage in the country. The University has also signed MoU with Centre for Development of Advanced Computing (C-DAC), Pune. Under the agreement, the two institutions will exchange information and communication technology.

About Dr. Vithalrao Vikhe Patil College of Engineering, Ahmednagar

The Institute was established in the year 1983 in the proximity of Ahmednagar Industrial area offering undergraduate & postgraduate courses. Over the years it has grown into a premier institution with excellent teaching-learning environment to achieve excellence in imparting quality technical education thereby generating technocrats compatible with needs of current industries & society. Taking into consideration the excellent infrastructure, teaching learning process, research & development by students & faculty members, UG courses are accredited by National Board of Accreditation, New Delhi and College is Accredited by National Assessment & Accreditation Council (NAAC), Bangalore. The institution is affiliated to Savitribai Phule Pune University, recognized by the Government of Maharashtra & approved by AICTE (All India Council for Technical Education), New Delhi. The institution is located on beautiful picturesque & pollution free land of 25 acres at a distance of 12 km from Ahmednagar City on Nagar-Shirdi state highway.

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Resource Centre in Data Sciences and Cyber Security:

National Resource Centre in Data Sciences and Cyber Security is established under the guidance RUSA Maharashtra from the grants received from the MHRD, Government of India under the 'Pandit Madan Mohan Malviya National Mission on Teachers and Teaching (PMMMNMTT)' scheme. Objective of this centre is capacity building of human resource which is recognized as a critical element to strengthen not only the organization/institutions but even the people at grassroots level by spreading awareness Data Sciences. There is a large gap between demand and availability of trained human resource in Data Sciences, who can beneficially utilize the available information for cyber safety. Data Science trained human resource is needed both as the provider and user of Technology. This is vital for sustainable development so that informed decision making can be done at all levels.

About the Training:

Data Science– An interdisciplinary field, data science deals with processes and systems that are used to extract knowledge or insights from large amounts of data. Data extracted can be either structured or unstructured. Data science is a continuation of data analysis fields like data mining, statistics, predictive analysis. A vast field, data science uses a lot of theories and techniques that are a part of other fields like information science, mathematics, statics, chemometrics and computer science. Some of the methods used in data science include probability models, machine learning, signal processing, data mining, statistical learning, database, data engineering, visualization, pattern recognition and learning, uncertainty modeling, computer programming among others. With advancements of so much of data, many aspects of data science are gaining immense importance, especially big data. Data science is not restricted to big data, which in itself is a big field because big data solutions are more focused on organizing and preprocessing the data rather than analyzing the data. In addition, machine learning has enhanced the growth and importance of data science in the last few years. Data has real value and every information extracted from it can make or break businesses. Analytics is the intersection of business and data science, offering new opportunities for a competitive advantage. It unlocks the predictive potential of data analysis to improve financial performance, strategic management, and operational efficiency. Data analytics can lead to valuable insights that can determine leads to increase sales, fraud detection, pattern recognition and risk prediction in various domains. As part of this initiative, a Faculty Development Programme (FDP) is conducted to focus on the fundamentals of data science with hands-on sessions on every topic handled using python.

Objectives of the Training:

- Train 2000 faculties
- Building networks of professional
- Sensitizing cyber security & Data Sciences to masses at large for strengthening cashless transactions.

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Eligibility:

Faculty Members from Science and Technology, Humanities, Social Sciences, Commerce and Management discipline from Universities, Colleges, NITs, IIITs, Engineering Colleges and other Institutions of Higher Education. As the number of participants is limited to 40, preference will be given on First Come First Serve basis.

Programme Schedule:

Dates: 10th – 15th October 2019

Venue: Dr. Vithalrao Vikhe Patil College of Engineering, Ahmednagar 414111

Day and Date	Course Contents
Day 1: Thursday, 10/10/2019	Introduction to Python
Day 2: Friday, 11/10/2019	Machine learning using Python
Day 3: Saturday,12/10/2019	Data Analytics using Python
Day 4: Sunday, 13/10/2019	Hands on session on Python
Day 5: Monday, 14/10/2019	Hands on session on Machine Learning using Python
Day 6: Tuesday, 15/10/2019	Hands on session on Machine Learning using Python, Examination and Evaluation

The eligible candidates will be given confirmation is available on web-portal and it will also be informed through email. All confirmed participants will have to submit a relieving letter from their institution on the first day of the training.

Laboratory assignments:

1. Introduction to Python
2. Introduction to Machine Learning.
3. Importing data using python for analysis
4. Exploring data sets for analysis
5. Working with loops, metrics, data submission
6. Building Data-Frames, merging data-frames and visualization with data-frames
7. Data analytics using python
8. Matrices Preview
9. Building Your First Matrix

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10. Dictionaries in Python
11. Matrix Operations
12. Explore & Define a ML use case
13. EDA and Feature Engineering
14. Working on Machine learning using python
15. Exploring your dataset
16. Importing data into Python
17. Filtering a Data Frame
18. Renaming Columns of a Data-frame
19. Exploratory Data Analysis
20. Univariate Analysis
21. Univariate Analysis 2
22. Simple & Multiple Linear
23. Regression
24. Regression Demo
25. Simple Network Servers
26. Package Managers
27. Importing data into Python

Registration:

Participants must register through online web-portal only. No need to send any printed documents to the Resource Center Shivaji University.
Registration Link: http://sangnaksuraksha.com

Registration details:

No Registration and participants free

Instructions for the Participants:

Attendance at all sessions is mandatory. Breakfast, Lunch and Tea will be provided.

Important Note:

This FDP under PMMMNMTT is applicable for CAS promotions as per UGC gazette.

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