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

Faculty Development Programme in Data Sciences

For

Faculty in Universities, Colleges and Institutes of Higher Education
(24th December to 30th December 2019)

Call for Registration and Participation
Venue: Bharati Vidyapeeth's Dr. Patangrao Kadam Mahavidyalaya, Sangli

Jointly Organized by
Shivaji University, Kolhapur
and
Bharati Vidyapeeth's Dr. Patangrao Kadam Mahavidyalaya, Sangli

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 Bharati Vidyapeeth's Dr. Patangrao Kadam Mahavidyalaya, Sangli

Bharati Vidyapeeth's Dr. Patangrao Kadam Mahavidyalaya, Sangli was established on 16th September 1985. It imparts education in the faculties of Arts, Science and Commerce. The college is trying to bridge disparity between the rural and urban culture. The NAAC committee reaccredited it with 'B++' grade (CGPA-2.96) in August 2018. College ranked in Rank band 101-150 at NIRF 2017 Ranking. Besides, taking into account our academic, social and sports achievements, Shivaji University has declared our college as the 'Lead College' in the Sangli district. The college has also received the Maharashtra State Award for substantial work through N.S.S. The college has been granted Ph.D. programs in Chemistry, Microbiology and Hindi. Recently UGC granted Community College Status to offer two skill-oriented diploma courses. Recently college received funding from DSTunderFISTscheme.

About Resource Centre in Cyber Security and Data Sciences:

National Resource Centre in Cyber Security and Data Sciences 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 Cyber security. There is a large gap between demand and availability of trained human resource in Cyber Security, who can beneficially utilize the available information for cyber safety. Cyber security 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.

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.
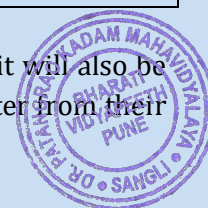
Programme Schedule:

Dates: 24th December to 30th December 2019

Venue: Bharati Vidyapeeth's Dr. Patangrao Kadam Mahavidyalaya, Sangli

Day and Date	Course Contents
Day 1: Tuesday, 24/12/2019	Inauguration, Introduction to Python, Python Basics
Day 2: Wednesday, 25/12/2019	Python Hands-on
Day 3: Thursday, 26/12/2019	Data Analytics using Python
Day 4: Friday, 27/12/2019	Hands on session on Python and Machine Learning
Day 5: Saturday, 28/12/2019	Hands on session on Machine Learning using Python
Day 6: Sunday, 29/12/2019	Hands on session on Machine Learning using Python,
Day 7: Monday, 30/12/2019	Examination and Evaluation, Valedictory

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

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:

Registration and participants is free of cost. As the number of participants is limited to 30, preference will be given on First Come First Serve basis. And Certificates of course completion will be given to the participants who will attain all the session, which are compulsory.

Instructions for the Participants:

➢ Attendance at all sessions is mandatory.
➢ Working Lunch and Tea will be provided.
➢ No TA /DA will be given to out station Participants.

Technical Requirements from participants:

➢ Relieving order from concerned college principal is mandatory and it's to be submitted on the first day of the FDP itself.
➢ Participants should carry their own laptop as well as debit cards, credit cards, payment wallets, net banking, UPI, mobile banking, paypal, aadhar, PAN card with them for sample demos.
➢ Participants should carry Smartphone either android / ios with them.
➢ Participant should focus on smartphone apps like Truecaller, PayTM, PhonePe, Google Pay, PayZApp, Authenicator, Facebook, WhatsApp, lnstagram

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

Organizing Committee

Patron

Hon. Prof. Dr. D. B. Shinde
Vice Chancellor
Shivaji University, Kolhapur

Hon. Prof. Dr. Shivajirao Kadam
Chancellor,
Bharati Vidyapeeth (Deemed to be University), Pune

Hon. Prof. Dr. D. T. Shirke
Pro-Vice Chancellor,
Shivaji University, Kolhapur

Hon. Dr. Vishwajeet Kadam MLA
Secretary, Bharati Vidyapeeth, Pune
Pro-Vice Chancellor,
Bharati Vidyapeeth (Deemed to be University), Pune

Dr. V. D. Nanavadekar
Registrar,
Shivaji University, Kolhapur

Mentor

Smt. Meeta Rajivlochan (IAS)
Principal Secretary, State Project Director, RUSA, Maharashtra

Principal Investigator

Dr. R.K. Kamat
IQAC Director,
Director, Innovation, Incubation and Linkages
Head, Department of Computer Science,
Shivaji University, Kolhapur

Co-Investigator

Dr. K. S. Oza
Assistant Professor,
Department of Computer Science,
Shivaji University, Kolhapur

Organizing Committee

Coordinator

Dr. A. R. Supale
IQAC Coordinator
Bharati Vidyapeeth's Dr. Patangrao Kadam
Mahavidyalaya, Sangli

Organizing Chairman

Dr. D. G. Kanase
Member, Management Council, SUK
Principal, Bharati Vidyapeeth's Dr. Patangrao Kadam
Mahavidyalaya, Sangli

Members

Dr. Mrs. P. M. Patil   Mr. T. R. Sawant

For further details contact:

Name	Cell no	Email
Dr. K. S. Oza	9850766660	kso_csd@unishivaji.ac.in
Dr. A. R. Supale	8830323283	amitsupale@gmail.com
Mr. Kabir Kharade	8055801285	kabirkharade@gmail.com

Shivaji University,
Vidya Nagar, Kolhapur – 416 004
(Maharashtra – INDIA)
Website: www.unishivaji.ac.in

Bharati Vidyapeeth's Dr. Patangrao Kadam
Mahavidyalaya, Sangli.
Website: http://dpkmsangli.bharatividyapeeth.edu/

Shivaji University, Kolhapur
and
Bharati Vidyapeeth's
Dr. Patangrao Kadam Mahavidyalaya, Sangli.

MHRD, India sponsored

Faculty Development Programme on Data Science
Under
Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching' (PMMMNMTT) scheme

24th December 2019

Inaugural Ceremony (10.30 a.m.)

Programme

Lighting the Lamp	:	**Chief Guest**
Introduction and Welcome to the guest	:	**Prin. Dr. D. G. Kanase**
Inaugural Address	:	**Prof. M. M. Salunkhe**
Principal Investigator address	:	**Dr. R. K. Kamat**
Vote of Thanks	:	**Dr. A. R. Supale**

Master of Ceremony: Dr. Mrs. P. M. Patil

Bharati Vidyapeeth's
Dr. Patangrao Kadam Mahavidyalaya, Sangli
Internal Quality Assurance Cell

Faculty Development Programme in Data Science
24t[th] December to 30th December 2019

<u>Report</u>

<u>Introduction</u>:

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, statistics, 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 modelling, computer programming among others. With advancements of so much 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

7

financial performance, strategic management, and operational efficiency. Data analytics can lead to valuable insights that can determine leads to increased 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.

In order to highlight the growing importance of the data science field in India and focus on related actions, the National Resource Centre in Cyber Security and Data Sciences was established in Shivaji University, Kolhapur under the guidance of 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. The Shivaji University sanctioned the Faculty Development Programme on Cyber Security to our college for the generation of awareness among college teachers. 30 delegates attended the FDP.

Proceedings:

Inaugural Ceremony: The FDP was attended by teachers from the different universities of Maharashtra state. The workshop was inaugurated at the auspicious hands of Prof. M. M. Salunkhe, Vice Chancellor, Bharati Vidyapeeth (Deemed to be University), Pune. The Inauguration Ceremony is presided over by Dr. R. K. Kamat, Principal Investigator, PMMMNMTT scheme of SUK. Principal Dr. D. G. Kanase welcomed the guest and delegates. The programme was opened with the inaugural keynote address by Prof. M. M. Salunkhe. He discussed the role of importance of data science in the education field. Dr. R. K. Kamat in his speech delivered the objectives of the programme and shared the outline of activities. He also shared his experiences. Dr. A. R. Supale offered a vote of thanks.

The day-wise outcome of the programme is as under:

Day and Date	Course Contents	Speaker
Day 1: Tuesday, 24/12/2019	Inauguration, Introduction to Python, Python Basics	**Mr. Swapnil M. Jawahire** Technical Trainer, Data Science, Machine

Day 2: Wednesday, 25/12/2019	Python Hands-on	Learning, Python
Day 3: Thursday, 26/12/2019	Data Analytics using Python	
Day 4: Friday, 27/12/2019	Hands-on session on Python and Machine Learning	And
Day 5: Saturday, 28/12/2019	Hands-on session on Machine Learning using Python	
Day 6: Sunday, 29/12/2019	Hands-on session on Machine Learning using Python,	
Day 7: Monday, 30/12/2019	Examination and Evaluation, Valedictory	Mr. Gokhale Technical Trainer, Data Science, Machine Learning, Python

Valedictory Ceremony:

The FDP was closed in the presence of Dr. Mrs. K. S. Oza, Co-Invistagor, PMMMNMTT scheme, SUK. Dr. A. R. Supale presented a review of the programme. The function was chaired by Prin. Dr. D. G. Kanase. The participants gave their feedback. The certificates were distributed. Dr. Mrs. P. M. Patil concluded the programme by offering a vote of thanks.

This programme has served its stated function. Numerous compliments and feedback from the participants indicate the success of the programme.
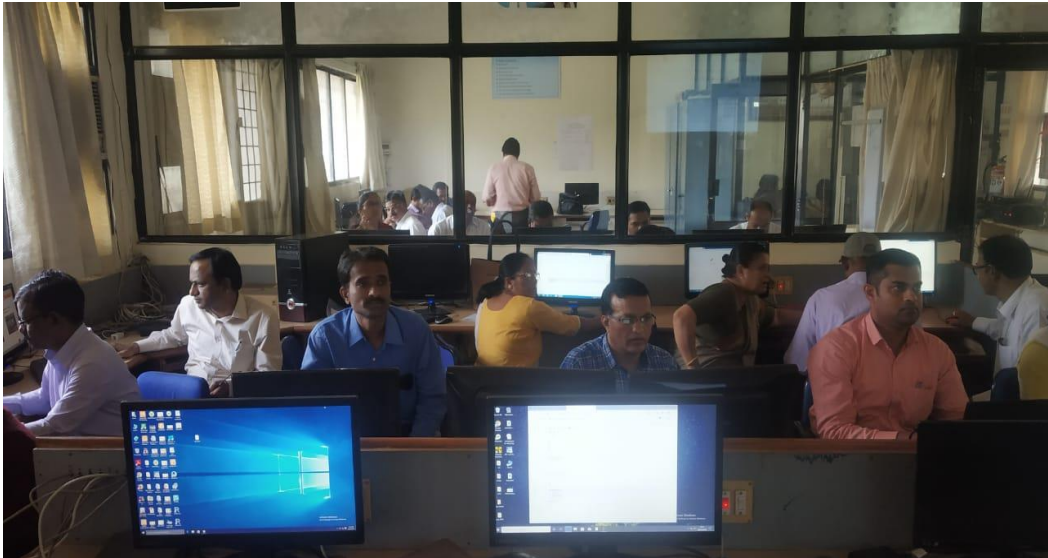
Co-ordinator
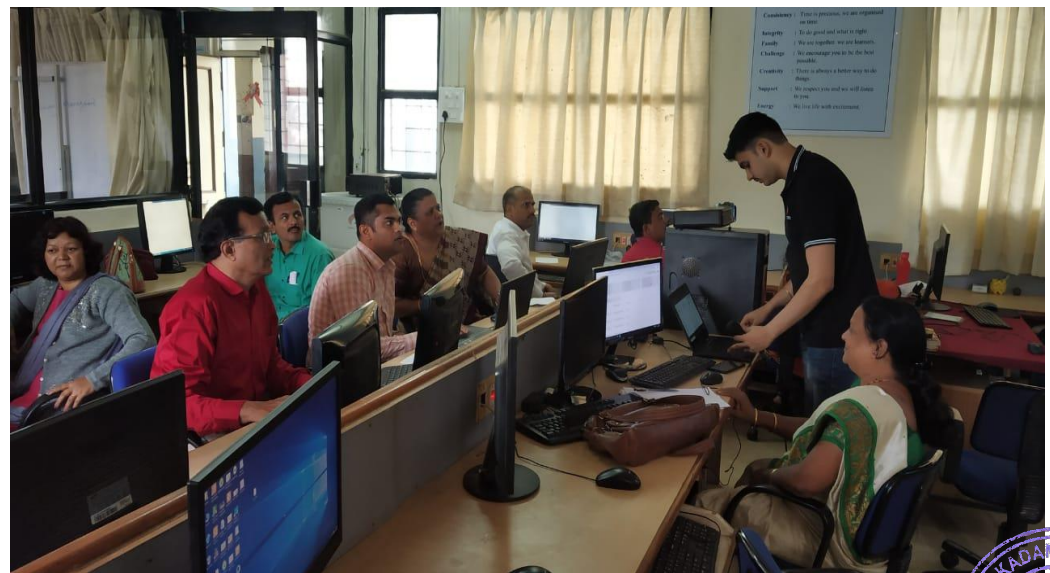Internal Quality Assurance Cell
Dr Patangrao Kadam Mahavidyalaya,
Sangli.

Principal,
Dr. Patangrao Kadam Mahavidyalaya,
Sangli.

Snaps of Activity:

Co-ordinator
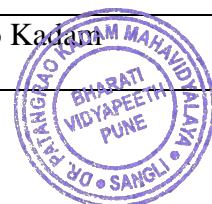Internal Quality Assurance Cell
Dr. Patangrao Kadam Mahavidyalaya,
Sangli.

Principal,
Dr. Patangrao Kadam Mahavidyalaya,
Sangli.

PMMMNMTT Resource Centre in Cyber Security & Data Sciences
Faculty Development Program on Data Science during
24th December, 2019 to 30th December, 2019
Venue: Bharati Vidyapeeths Dr. Patangrao Kadam Mahavidyalaya, Sangli

List of Participants

Sr. No	Name	Name of the Institute
1.	Mrs. Sahasrabuddhe Dhanashri Vinay	Bharati Vidyapeeths Institute of Management And Rural Development Administration, Sangli
2.	Mr. Pawar Udayraj Tukaram	Smt Kasturbai Walchand College, Sangli
3.	Mr. Sadavare Ashok Bapuso	S.G.M. College, Karad
4.	Dr. Pujari Rajendra Shripad	Bharati Vidyapeeth Institute Of Management And Rural Development Administration,
5.	Mr. Shinde Suryakant Jalindar	Adarsh College, Vita
6.	Dr. Shabnam Santosh Mane	Abhijit Kadam Institute of Management And Social Sciences, Solapur
7.	Dr. Minchekar Vrushali Vikas	Sahakarbhushan S. K. Patil College, Kurundwad
8.	Mr. Dhale Ravindra Namdev	Miraj Mahavidyalaya, Miraj
9.	Mr. Kengar Appasaheb Namdev	Babasaheb Chitale Mahavidyalaya, Bhilawadi
10.	Dr. Sawant Raju Kalmesh	Nemgonda Dada Patil Night College of Arts And Commerce, Sangli
11.	Dr. Dhale Gautam N.	Smt. Gangabai K. Ghodawat Kanya Mahavidyalaya, Jaysingpur
12.	Dr. Patil Bharat Vitthal	Bharati Vidyapeeths M. B. S. K. Kanya Mahavidyalaya, Kadegaon
13.	Dr. Mahajan Smita S.	Jaysingpur College, Jaysingpur
14.	Dr. Bhosale Appasaheb Kundalik	Raje Ramrao Mahavidyalaya, Jath
15.	Ms. Bhavikatti Bharati Kadsiddheshwar	Bharati Vidyapeeth,s Dr.Patangrao Kadam Mahavidyalaya, Sangli
16.	Mr. Bokane Amol Bhupal	Bharati Vidyapeeth's Dr.Patangrao Kadam Mahavidyalaya, Sangli

17.	Mr. Vande Amol Ramrao	Bharati Vidyapeeth's Dr.Patangrao Kadam Mahavidyalaya, Sangli
18.	Miss. Kamble Rupali Shidu	Bharati Vidyapeeth's Dr.Patangrao Kadam Mahavidyalaya, Sangli
19.	Dr. Awale Vikas Baban	Bharati Vidyapeeth's Dr. Patangrao Kadam Mahavidyalaya, Sangli
20.	Dr. Sargar Ankush Mahadeo	Bharati Vidyapeeth's Dr Patangrao Kadam Mahavidyalaya, Sangli
21.	Ms. Hatakar Jayashri Dhondiram	Bharati Vidyapeeth's Dr.Patangrao Kadam Mahavidyalaya, Sangli
22.	Dr. Patil Chandrakant Ekanath	Bharati Vidyapeeth's Dr.Patangrao Kadam Mahavidyalaya, Sangli
23.	Dr. Gaikwad Nitin Vinayak	Bharati Vidyapeeth's Dr. Patangrao Kadam Mahavidyalaya, Sangli
24.	Dr. Latthe Sanjay Subhash	Raje Ramrao Mahavidyalaya, Jath
25.	Ms. Patil Sunanda Vikas	Sahakarbhushan S. K. Patil College, Kurundwad
26.	Dr. Pawar Yuvaraj Yashwant	S. P. S. College of Education, Sangli
27.	Dr. Kagne Raju Pandurang	Willingdon College, Sangli
28.	Dr. Shelake Girish Dhondiram	Willingdon College, Sangli
29.	Mr. Attar Imtiyajahmad A. Majid	V. P. Institute of Management Studies & Research, Sangli
30.	Dr. Honmore Vinayak Madhukar	Smt. M. G. Kanya Mahavidyalaya, Sangli

Co-ordinator
Internal Quality Assurance Cell
Dr. Patangrao Kadam Mahavidyalaya,
Sangli.

Principal,
Dr. Patangrao Kadam Mahavidyalaya,
Sangli.