

Department of Statistics  
Vivekanand College,  
Kolhapur. (Autonomous)  
Date: 22/03/2022

To  
The Principal,  
Vivekanand College,  
Kolhapur. (Autonomous)

Sub: Re. Permission to organize Workshop....

Respected Sir,

With reference to the above subject, our department has decided to organize two day workshop entitled "Statistical Analysis using Python" on 26<sup>th</sup> March & 27<sup>th</sup> March 2022. Please grant us permission for the same.

Thanking you,

Yours Faithfully

*V. Pawar*

(Ms V. V. Pawar)

Department of Statistics  
Vivekanand College Kolhapur

Approved  
Pr  
22/3/2022

**Vivekanand College, Kolhapur (Autonomous)  
Department of Statistics**

**Notice**

**Date 24/03/2022**

All the students of B.Sc. III are hereby informed that, we are organizing two days' workshop entitled "Statistics Analysis Using Python" on 26<sup>th</sup> & 27<sup>th</sup> March 2022 at 11.00 am in the Library Hall. Students who are interested to join this workshop should register their names in the department of Statistics.



Ms. V. V. Pawar

Head

Department of Statistics  
Vivekanand College, Kolhapur

**“Education for Knowledge, Science and Culture”**

**- Shikshanmaharshi Dr. Bapuji Salunkhe**

**Shri Swami Vivekanand Shikshan Sanstha’s**

**VIVEKANAND COLLEGE, KOLHAPUR (Autonomous)**

**Department of Statistics**

**Two Days Workshop On**

**Statistical Analysis Using Python**

**Time Table 2021-22**

<b>Day I</b>		
<b>Content</b>	<b>Time</b>	<b>Speaker</b>
Registration/ Breakfast	9.30 AM – 11.00 AM	
Inaugural Function	11.00 AM – 12.30 PM	Principal Dr. R. R. Kumbhar Ms. V. V. Pawar Mr. Sharad R. Mengane Ms. M. B. Lohar Mr. A. A. Pawar Ms. A. M. Makandar Ms. P. C. Patil
Session I (Basic concept in Python)	12.30 PM – 2.00 PM	Mr. Sujit Kadam Team Lead Data Scientist, Accenture, Pune (Time Series and predictive modelling projects)
Lunch Break	2.00 PM – 3.00 PM	
Session II (Discussion session: Industry use cases with python, How to make industry oriented projects using python)	3.00 PM Onwards	Mr. Sharad R. Mengane Data Scientist, Capgemini, Pune
<b>Day II</b>		
Session I (Basic python assignment for better understanding, Interview Preparation Guidance) (Tea Break 10.30 AM – 10.45 AM)	9.00 AM – 12.30 PM	Mr. Sujit Kadam Team Lead Data Scientist, Accenture, Pune (Time Series and predictive modelling projects)
Lunch	12.30 PM – 1.30 PM	
Hands on Training	1.30 PM – 4.00 PM	
Valedictory Function	4.00 PM Onwards	

**VIVEKANAND COLLEGE KOLHAPUR, AUTONOMOUS**  
**Department of Statistics**  
**Two days Workshop on**  
**“Statistical Analysis Using Python”**  
**Syllabus**

**Introduction to Python.**

Setting up the Environment (Python Interpreter, Pycharm, Jupyter)

Data types, Operators, Control Structures.

Functions (Defining and Calling a Function)

Lists and Dictionaries

File Handling (Importing File from Excel, Reading and Writing a file)

**Statistical Python: -**

Numpy

Matplotlib

Packages used for Statistical data (Statsmodels)

Generating random numbers

Linear Regression

Hypothesis Testing

Building ANOVA Model

Chi-square testing

Non-parametric tests I (sign test, Wilcoxon signed rank test)

Non-parametric tests II (Median test, Mann-Whitney test, Kolmogorov Smirnov test)

Clustering

1st Day

Vivekanand College, Kolhapur (Autonomous)

Department of Statistics

Two day Workshop on Statistical Analysis Using Python26<sup>th</sup> & 27<sup>th</sup> March, 2022

Time: 12:00 to 02:00 pm

Day I/II:

Session I/II:

Resource Person: Mr. Sujit Kadam

BOYS

Sr. No	Student Name	College	Sign
1	shivam Nilkanth Jawale	VCK	
2	Amey B. Jagadale	VCK	
3	Swapnil V. Deshmukh	VCK	
4	Siddhant M. Barwade	VCK	S.M.B
5	Aniket Ananda Patil	RCK	
6	Aditya Ashok Power	RCK	
7	Yugant Shashikant Mose	RCK	
8	Suraj Raghunath Patil	RCSC	
9	Pavankumar Tanaji Patil	RCSC	
10	Ganesh Jaywant Kudele	RCK	
11	Omkar Pandurang Patil	RCK	
12	Akhilash Shivaji Banke	"	
13	Ruturaj Tanaji Saravane	"	
14	Sanjay Sattappa Chougale	"	
15	Sandesh Ashok Sutar	MCK	
16	Rahul Khamu Mane	MCK	
17	Siddhesh Ravindra Lohar	VCK	
18	Yogiraj Rajendra Killedar	VCK	
19	Kishor Vijay Khot	VCK	
20	Siraj Y. Shidvankar	VCK	
21	Siddhesh R. Jitakar	VCK	
22	Uditanshu Prabhavale	VCK	
23	Praman. A. Marol	VCK	
24	Karan S. Injulkar	VCK	
25	Deep S. Boravadekar	GKA	
26	Nagesh Babaso Kothawale	Jaysingpur college	
27	Pradnya Vijay Chaugule	MMK	
28	Sayali Sattappa Kambale	MMK	
29	Kedar Sanjay Kumathekar	VCK	
30	Santosh Ananda Gurnav	VCK	
31	Bhagale Praman Praman	The New Collage, kop	
32	Honale Akshay Ajit	"	
33	Geonkar Mithil Dilip	"	
34	Patil Audumbar Baban	"	
35			



Vivekanand College, Kolhapur (Autonomous)

Department of Statistics

Two day Workshop on Statistical Analysis Using Python

26<sup>th</sup> & 27<sup>th</sup> March, 2022

1<sup>st</sup> Day

Day I/II:

Session I/II:

Time: 12:00 to 02:00 pm

Resource Person: Mr. Sujit Kadam

GIRLS

Sr. No	Student Name	College	Sign
1	Vaishnavi Vishwanath Paril	R.C.K	V.V. Paril
2	Nikita Dhanaji Gankpal	R.C.K	Nikita
3	Sanika Sanjay Patil	R.C.K	Patil
4	Sanika Anil Patil	R.C.K	Patil
5	Dipti Prakash khot	R.C.S.C.	Dipti
6	Pritee Pravin Jamadade	R.C.S.C.	Pritee
7	Swati Jagannath Desai	R.C.S.C	Swati
8	Poonam Jayasing Sidouk	R.C.S.C.	Poonam
9	Pooja Pooji Hatakari	R.C.S.C	Pooja
10	Shruti Tanuji Patil	R.C.K	Patil
11	Shruti Sachin Kokate	R.C.K.	Kokate
12	Sharvari Ramkrishna Jadhav	R.C.K.	Sharvari
13	Neha Sharad Patil	R.C.K.	N.S. Patil.
14	chinmayee Mandar sabinis	R.C.K	Chinmayee
15	Ashwini Mohan Kamele	V.C.K	Ashwini
16	Amate Sonam Ashok	R.C.S.C	S.A. Amate
17	Bhasale Anjali Sanjay	R.C.S.C	Bhasale
18	Chikkodi Swati Sanjay	R.C.K.	Chikkodi
19	Shrutika Arjun Patil	R.C.K	Patil
20	Pratiksha Krushnat Patil	R.C.K.	Pratiksha
21	Sakshi Subhash Solase	V.C.K	Sakshi
22	Rutuja Anant Patil	V.C.K.	Rutuja
23	Pranali Ravikant Kolekar	V.C.K	Pranali
24	Anjali Deelip Mali	R.C.K	Anjali
25	Shreyas Santosh Bhudamgeale	R.C.K	Shreyas
26	Samsiddhi Parashram Naralkar	R.C.S.C.	Samsiddhi
27	Puja Anant Grawade	R.C.S.C.	Puja
28	Vrishali M. Parab	R.C.S.C	Vrishali
29	Padwal Rajashri Shankar	R.C.S.C	Padwal
30	Ghadage Rutuja Keshav	R.C.S.C	Ghadage
31	Naik Shifa Shahid	R.C.K	Naik
32	Patil Piyanka Kishnat	R.C.K.	Patil
33	Dhere Rutuja Shivaji	V.C.K	Dhere
34	Mudrale Shweta Rahul	V.C.K	Shweta
35	Mane Supriya Narayan	V.C.K	Mane



Vivekanand College, Kolhapur (Autonomous)

1<sup>st</sup> Day

Department of Statistics

Two day Workshop on Statistical Analysis Using Python

26<sup>th</sup> & 27<sup>th</sup> March, 2022

Time: 2.30 to -----

Day I/II:

Session I/II:

Resource Person:

Sr. No	Student Name	College	Sign
1	Deshmukh Srisapni	VCK	
2	Sammed. M. Barwade	VCK	S. M. B
3	Shivam Jawale	VCK	
4	Yogiraj Killedar	VCK	
5	Uditanshu. S. Prabhavale	VCK	U.S.P.
6	Siddhesh R. Lohar	VCK	
7	Santosh. A. Gursav	VCK	
8	Lalita R. Koli	VCK	
9	Rutuja A. Patil	VCK	
10	Jisna Anoop Mathew	VCK	
11	Shraddha Dinkar Jadhav	VCK	
12	Akhilesh S. Banke	RCK	
13	Ruturaj T. Saravane	"	
14	Sanket S. Chougale	"	
15	Pavankumar T. Patil	RCSC	
16	Suraj Raghunath Patil	RCSC	
17	Neha Sharad Patil.	R.C.K	N.S. Patil.
18	chinmayra Mandar Sahnis	RCK	
19	shreya santosh Bhudargude	RCK	
20	Anjali Deelip Mali	RCK	
21	Shifa Shahid Naik	RCK	
22	Priyanka krishnat Patil	RCK	
23	Ryuta Shivaji Dhese	VCK	
24	Shweta Rahul Mundeale	VCK	Shweta
25	Patil Rachana Baban	NCK	
26	Aakanksha Chandrakant Jadhav	VCK	
27	Sakshi subhash Solase	VCK	
28	Ravi Vaishnavi Anil	NCK	
29	Mounali Ramchandra Powers	VCK	
30	Pooja Dhanaji Gursav	VCK	
31	Supriya Narayan Mane	VCK	
32	Sakshi Sanjay Warake	VCK	
33	Poonam Jayasing Sidouk	RCSC	
34	Dipti Prakash Khot	RCSC	
35	Pooja Pooji Hatakhar	RCSC	



Vivekanand College, Kolhapur (Autonomous)

Department of Statistics

Two day Workshop on Statistical Analysis Using Python

26<sup>th</sup> & 27<sup>th</sup> March, 2022

1<sup>st</sup> Day

Day I/II:

Session I/II:

Time: 2:30 to -----

Resource Person:

Sr. No	Student Name	College	Sign
1	Mithil Dilip Gaonkar	H.C.K.	
2	Nagesh Babaso Kothawale	Jaysingpur college	
3	Puraj Balasahab Patil	RCK	
4	Atharva sanjay Tayshete	RCK	
5	Chetan Balasahab Kamble	RCK	
6	Omkar Paridumang Patil	RCK	
7	Ganesh Jaywont Kudale	RCK	
8	Aniket Ananda Patil	RCK	
9	Siddhesh Raghunath Jitakar.	VCK	
10	Amay Jagdale	VCK	
11	Kishor vijay khot	VCK	
12	Siraj Y. Shidvankar	VCK	
13	Kedar S. Kumthekar	VCK	
14	Yugant Shashikant Mose	RCK	
15	Aditya Ashok Powar.	RCK	
16	Amate Sonam Ashok	RCSC	
17	Anjali sanjay Bhosale	RCSC	
18	Premaw A. Marse	VCK	
19	Deep Boravadekar	GUKA	
20	Karan Injulkar	VCK	
21	Sharvari Ramkrishna Jadhav	RCK	
22	Shruti Tanaji Patil	NCK	
23	Shruti Sachin kokate.	RCK	
24	Audambar Baban Patil	NCK	
25	Naralkar Samiddhi Parashram	R.C.S.C	
26	Vishali . M. Parab	R.C.S.C	
27	Puja Anant Gawade	R.C.S.C	
28	Pritee P. Jamadade	R.C.S.C	
29	Padwal Rajashri shankar	R.C.S.C	
30	Ghadage Rutuja keshav	R.C.S.C	
31	Bhagale Pramod Pramod	The New collage	
32	Honole Akshay Ajit	---	
33	Khushi Deepak Ramchandani	VCK	
34	sejal sudhir shinde	VCK	
35	Ashwini Mohan Kamble	VCK	



2<sup>nd</sup> day

Vivekanand College, Kolhapur (Autonomous)

Department of Statistics

Two day Workshop on Statistical Analysis Using Python

26<sup>th</sup> & 27<sup>th</sup> March, 2022

Day I/II:

Session I/II:

Time: 9:00<sup>am</sup> to 1:30<sup>pm</sup>

Resource Person:

Sr. No	Student Name	College	Sign
1	Pavankumar Tanaji Patil	R.C.S.C., Kol.	
2	Suraj Reighunath Patil	R.C.S.C., Kol	
3	Chetan Balasaheb Kamble	R.C.K	
4	Omkar Pandurang Patil	R.C.K.	
5	Ganesh Jaywant Kudale	R.C.K	
6	Aditya Ashok Powar.	B.C.K.	
7	Yugant Shashikant More	R.C.K	
8	Aniket Ananda Patil	R.C.K	
9	Khushi Deepak Ramchandani	V.C.K	
10	Akhvini Mohan Kamble	VCK	
11	Sejal Sudhir Shinde	V.C.K	
12	Sammed. M. Aswade	V.C.K	
13	Shivam. Javale	V.C.K	
14	Amey Jagdale	V.C.K	
15	Suannil Deshmukh	V.C.K	
16	Munav More	V.C.K	
17	Siddhesh R. Jitakar.	V.C.K.	
18	Sharvari R. Jadhav	R.C.K.	
19	Shruti Tanaji Patil	N.C.K.	
20	Shruti Sachin Kokate	R.C.K	
21	Mrunali Ramchandra Powar	V.C.K	
22	Swati Jagannath Desai	R.C.S.C	
23	Padwal Rajashri Shankar	R.C.S.C	
24	Priete Pravin Jambadade	R.C.S.C.	
25	Ghadage Rutuja Keshav	R.C.S.C.	
26	Poonam Jayasing Sidruk	R.C.S.C	
27	Pooja Piroji Hatkar	R.C.S.C	
28	Nipti Prakash Khot.	R.C.S.C	
29	Vishali M. Parab	R.C.S.C	
30	Nazalkar. Samadddhi . P.	R.C.S.C	
31	Puja Anant Gawade	R.C.S.C	
32	Sakshi Sanjay Warake	VCK	
33	Supriya Narayan Mane.	VCK	
34	Lalita Ramdas Koli	VCK	
35	Aakanksha Chandrakant Jadhav	VCK	

Vivekanand College, Kolhapur (Autonomous)  
Department of Statistics  
Two day Workshop on Statistical Analysis Using Python

26<sup>th</sup> & 27<sup>th</sup> March, 2022

Day I/II:

Session I/II:

Time: 09:00<sup>am</sup> to 1:30 pm

Resource Person: Mr. Dnyanesh Kadam

Sr. No	Student Name	College	Sign
1	Jisna Anoop Mathew	VCK	Jisna
2	Akanksha Nilesh Mugde	VCK	Akanksha
3	Rutuja Anant Patil	VCK	Rutuja
4	Shraddha Dinkar Jadhav	VCK	Shraddha
5	Rujuta Shivaji Dhese	VCK	Rujuta
6	Shweta Rahul Mudrale	VCK	Shweta
7	Priyanka Krishnat Patil	RCK	Priyanka
8	Shifa Shahid Naik	RCK	Shifa
9	Akshay Ajit Honole	NCK	Akshay
10	Bhagale Pramod Pramod	The New collage, kop	Bhagale
11	Aasudambar Baban Patil	The New college	Aasudambar
12	Mithil Dilip Gaonkar	The new collage	Mithil
13	Ganket S. Chougale	RCK	Ganket
14	Alkitesh S. Ranke	"	Alkitesh
15	Ruturaj T. Saravane	"	Ruturaj
16	Kedar S. Kumathekar	VCK	Kedar
17	Anjali Deelip Mali	RCK	Anjali
18	Shreya Santosh Bhulerigade	RCK	Shreya
19	Neha Sharad Patil	R.C.K.	N.S. Patil
20	Chinmayee Mandar Sabnis	RCK	Chinmayee
21	Patil Rachana Baban	NCK	Patil
22	Raut Valsaravi Anil	NCK	Raut
23	Puraj Balasaheb Patil	RCK	Puraj
24	Atharva Sanjay Tayshete	RCK	Atharva
25	Sakshi Subhash Solase	VCK	Sakshi
26	Nagesh Babaso Kothawale	Taysingpur college, Taysingpur	Nagesh
27	Shrutika Arjun Patil	BCK	Shrutika
28	Swati Sanjay Chikkodi	RCK	Swati
29	Pratiksha Krushnat Patil	RCK	Pratiksha
30	Sanika Anil Patil	RCK	Sanika
31			
32			
33			
34			
35			





“Education for Knowledge, Science and Culture”  
-Shikshanmaharshi Dr. Bapuji Salunkhe  
**VIVEKANAND COLLEGE, KOLHAPUR**  
(AUTONOMOUS)  
**INTERNAL QUALITY ASSURANCE CELL**



**Report on Two Day workshop on “Statistical Analysis using Python”**

1. Name of the Department – Statistics
2. Aim –To make a student familiar to Python.
3. Objectives –
  1. To introduce basic concepts like data types, arithmetic operations and operators.
  2. To learn how to install libraries in python, statistical analysis using python
  3. To introduce the concept of ‘COLAB’ in Google and how to write program on it.
4. Day and Date -26/3/2022- 27/3/2022
5. Venue- Library Hall and Computer Lab.
6. Resource persons –
  - 1) Mr. Sujit Kadam, Team lead Data Scientist, Accenture, Pune.
  - 2) Mr. Sharad Mengane, Data Scientist Capgemini, Pune
7. Number of beneficiaries – **101 students (47 girls +54 boys)**  
**19 Teachers (10 Female + 9Male)**
8. Brief Description –



Department of Statistics, Vivekanand College, Kolhapur (Autonomous) conducted two-days’ workshop on “**Statistical Analysis using Python**” during 26-27<sup>th</sup> March 2022. The workshop started with formal inauguration under the presence of Dr. R.R. Kumbhar, Principal of Vivekanand College Kolhapur, President of the function and Ms. V.V. Pawar Madam, Head of the Department of Statistics.

Students from the various colleges like Rajaram college, Kolhapur, New college, Mahavir college, Shahu college and Jaysingpur college were participated in the event. The dignitaries were welcomed by giving a token of appreciation. Ms. V. V. Pawar madam introduced resource persons as well as need of python for advancement of the career along with two days plan of the workshop. She also mentioned the progress in the field of statistics and the importance of staying upgraded technologies. Principal Dr.R.R. Kumbhar gave the presidential address in which he mentioned

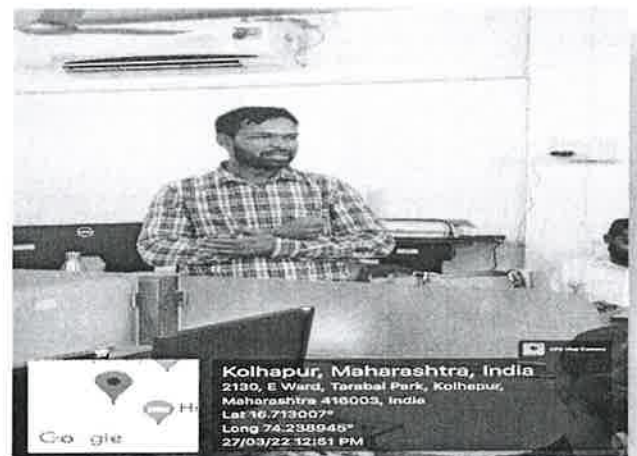
“**A Statistician is not the one who only has knowledge but also needs logical thinking**”. The inaugural function was completed with the vote of thanks presented by the coordinator Ms. P.C. Patil. The workshop was divided into three sessions.



In the 1<sup>st</sup> session Mr. Sujit Kadam gave the brief introduction of 'Python' and its uses in industries. He recommended learning programming skills like Python, R, SQL, SAS, Tableau, Power BI, etc. He also mentioned the need of learning Python and the laze of learning. Mr. Sujit Kadam also mentioned the role of data scientist, the process followed by a data scientist, the spectrum of data science, skills needed to become a data scientist, and how to become a data scientist. Mr. Sujit Kadam also mentioned various libraries in Python, Anaconda installation, Spyder, Jupyter notebook etc. Mr. Sharad Mengane taught about data types, arithmetic operations, calling by reference, installing packages, 2D array in first session. The session included with a vote of thanks.

The 2<sup>nd</sup> session was practical session conducted in the computer science lab. The concepts taught by Mr. Sharad Mengane were conducted practically by each student individually. Mr. Sujit Kadam introduced the concept of 'COLAB' in Google and discussed how to write program codes on COLAB. He also taught the function of list, list manipulation, numbers reverse and sort. He gave an introduction to Numpy and provided various open and paid sources for learning programming.

On the last day Mr. Sujit Kadam introduced about various functions available in Pandas library. He explained how to apply logical NOT, AND, OR to column. The functions for manipulation of data frames, loops & graphical tools in Python were explained & demonstrated through programs. The program was concluded by valedictory function. Students also shared their experience about the workshop.



## 7. Outcomes –

1. Students understood the basic concepts in Python.
2. They learned various libraries such as NumPy and Pandas Also they learned to write program code on COLAB.
3. Students freely shared their opinions about the workshop & became happy for providing such a workshop.



*V. V. Pawar*  
Ms. V. V. Pawar  
Head  
Department of Statistics  
**Department of Statistics**  
Vivekanand College, Kolhapur  
(Autonomous)