



Xavier Institute of Engineering

Mahim, Mumbai 400016

Department of Computer Engineering

(Affiliated to University of Mumbai)

STTP REPORT

IET and ISTE approved Six Days Hands-on STTP on Foundations of “Applied Data Science & its Applications”

Date: January 06-12, 2023

Mode of conduction: Offline

Name of the Institute: Xavier Institute of Engineering, Mahim, Mumbai

Department of Computer Engineering of Xavier Institute of Engineering, Mahim, Mumbai conducted ISTE approved one week Short Term Training Program on Foundations of "**Applied Data Science and its Applications**" for faculty members, industry professionals, research scholars, post-graduate and graduate students from January 06-12, 2023 in association with The Institution of Engineering and Technology, Mumbai Local Network.

Objectives:

1. To introduce participants to the basic concepts of data science.
2. To acquire an in-depth understanding of data exploration and data visualization.
3. To be familiar with various anomaly detection techniques.
4. To demonstrate the data science techniques for real world application.

Participation:

40 Participants from various institutions such as Thadomal Shahani Engineering College, Fr. C. Rodrigues Institute of Technology- Vashi, Pillai College of Engineering- Panvel, South Indian Education Society (SIES-GST)- Nerul, M. H. Saboo Siddik College of Engineering- Byculla, St. John college of Engineering and Management- Palghar, A. P. Shah Institute of Technology- Thane, Terna Engineering College- Navi Mumbai, including professionals from IT industry like Tata Consultancy Services and students were participated in the STTP on Foundations of "Applied Data Science and its Applications".

DAY 1: 6/01/2023

- The session started with the formal inauguration function. The chief guest of the Inauguration function was Dr. Ameya Tripathy, Professor, Don Bosco Institute of Technology. Father John Rose S.J., Director, XIE felicitated the chief guest and addressed the participants. Dr. Y.D.Venkatesh, Principal , XIE addressed the participants.
- After the inauguration function, key note session on Data science was delivered by Dr. Ameya Tripathy, Professor, Don Bosco Institute of Technology. There was a hands on session on MAC post lunch.

DAY 2: 7/01/2023

- Dr. Vaishali Gaikwad, Head of the Department, Xavier institute of engineering introduced & felicitated Resource Person **Dr.S. Vairachilai, Head of the Department, Department of Computational Data Science, VIT-Bhopal.**
- Then the session for day 2 started at 10:00 a.m. Ma'am has started with explanation of different data types as it's a foundation of any system that we need to understand. Then ma'am explained about different Summary analytics techniques & visual analytics technique. Then ma'am has explained about descriptive statistics & we implemented the same in python which is a part of Summary analytics technique. At 4:00 p.m. ma'am concluded the Day-2 session.

DAY 3: 9/01/2023

- Resource Person **Dr.S. Vairachilai, Head of the department, Department of Computational Data Science, VIT-Bhopal** began the session at 10.00 am. Ma'am started with Inferential Technique and explained about Hypothesis testing, where we learnt about T test & Z test hypothesis. We have solved the problems manually & implemented the same with rice bag dataset case Study using Python. At 4:00 p.m. ma'am concluded the Day-3 session.

DAY 4: 10/01/2023

- Resource Person **Dr.S. Vairachilai, Head of the department, Department of Computational Data Science, VIT-Bhopal** began the session at 10.00 am. Ma'am started with Regression analysis and she explained linear regression & multiple linear regression with different case studies & we implemented the same in Python. Ma'am also explained about Reinforcement learning, Feature engineering. At 4:00 p.m. ma'am concluded the Day-4 session.

DAY 5: 11/01/2023

- Resource Person **Dr.S. Vairachilai, Head of the department, Department of Computational Data Science, VIT-Bhopal** began the session at 10.00 am. Ma'am has started with ANOVA which is a part of inferential statistics. Ma'am has explained the concept with the help of case study & then we solved the same manually & implemented in Python. Then Ma'am discussed about Class imbalanced problem & SMOTE technique to overcome the problem with the help of case study. At 4:00 p.m. ma'am concluded the Day-5 session.

DAY 6: 12/01/2023

- The day began with the Orientation on Applied data science which was conducted by the resource persons **Dr. Jyoti More, Associate Professor, Fr. Conceicao Rodrigues Institute of Technology, Navi Mumbai** and **Prof. Vaishali Suryawanshi, Assistant Professor, Computer Engineering Department, Thadomal Shahani Engineering College, Bandra, Mumbai.** After this session, Applications of Data Science conducted by Resource Person **Mr.Ashutosh, Data Scientist, Tata Consultancy Services (TCS), Mumbai .**

GLIMPSES OF THE STTP





Coordinators
Prof. Sushama Khanvilkar
Prof. S. Beatrice