



Vishnu Waman Thakur Charitable Trust's
VIVA Institute of Technology

Approved by AICTE New Delhi, Recognized by DTE, Govt. of Maharashtra
And Affiliated to University of Mumbai

ACCREDITED by NAAC with "B++" Grade

Report on STTP

Topic Name:	ISTE approved one week STTP on "Data Analytics & Intelligent Decision Making Using Python" in association with University of Mumbai and ICT Academy
Organizing Departments:	Department of Electronics & Telecommunication Engg., Department of Master of Computer Applications, Department of Electrical & Computer Engg., Department of CSE (AI & ML) Engg., Department of Computer Engg.
Name of the Guest Speaker:	Mr. Abhay Dhanmeher
Date:	8 th December 25 to 13 th December 25
Time:	9am to 4pm
No. of Participants:	55

Program Overview:

This ISTE-approved offline Short-Term Training Program (STTP) is designed to empower educators with the skills to design, develop, and deploy data-driven solutions using Python. The program offers hands-on experience with core Python libraries for data manipulation (pandas, NumPy), visualization (Matplotlib, Seaborn), and machine-learning (scikit-learn, TensorFlow), as well as best practices for coding, testing, and deployment. It prepares participants for effectively integrating Python-based analytics and intelligent decision-making tools into their curricula and research.

Day-wise Summary:

Day 1 (8th Dec 2025):

On the first day of the STTP inauguration, the Principal, HOD's and faculty members were present. The Guest speaker Mr. Abhay Dhanmeher from ICT Academy and Mr. Sainath Waghle, Project Coordinator for Academic Operations at ICT Academy, were introduced to all the faculty members.

The STTP began with an overview of **Python**, its features, and applications in modern computing. Participants learned how to install Python, work with IDEs, and write basic scripts. Key topics included **variables, data types, operators, and simple input/output functions**. The day ended with hands-on exercises to strengthen basic syntax understanding.



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401303, India
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Day 2 (9th Dec 2025):

The second day focused on advanced programming concepts. Participants learned **Object-Oriented Programming (OOPS) in Python**, covering classes, objects, constructors, inheritance, and polymorphism. This was followed by Special Functions such as lambda expressions, map(), filter(), reduce(), recursion, and decorators. The session concluded with Exception Handling, where participants practiced using try, except, else, and finally blocks, along with custom exceptions.

Day 3 (10th Dec 2025):

The focus shifted towards Python analytics. Participants were introduced to:

- **NumPy** for numerical computing, arrays, and vectorized operations
- **Pandas** for data handling, data cleaning, indexing, and data transformation

Hands-on exercises included loading datasets, checking data quality, performing filtering operations, handling missing values, and generating descriptive statistics.

Day 4 (11th Dec 2025):

This day focused on practical **data analytics** workflows using real datasets, where participants learned how to load and preprocess data, handle missing values, and conduct Exploratory Data Analysis (EDA). They also generated statistical summaries, identified correlations and trends, and created basic visual insights to interpret the data effectively. A dedicated hands-on session allowed participants to implement complete analytics pipelines using Pandas, NumPy, and various visualization tools.

Day 5 (12th Dec 2025):

Day 5 was dedicated to demonstrating **real-world applications of Python**, including data processing scripts, automation examples, file handling tasks, data cleaning workflows, visualization dashboards, and introductory machine learning use cases. Multiple **hands-on sessions** were conducted throughout the day, allowing participants to build small real-world programs and analyze sample datasets.

Day 6 (13th Dec 2025):

The final day concluded with the **Capstone Project**, where participants integrated all the concepts learned during the training into a practical, real-world application. After completing their projects, participants took part in a quiz designed to assess their understanding of Python fundamentals and



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analytical techniques. The program wrapped up with a valedictory function, during which participants shared their learning experiences, received feedback, and marked the successful completion of the training.

Conclusion:

The STTP on Python provided participants with both theoretical and practical knowledge of the language and its ecosystem. The hands-on experience in building scripts, developing data-driven applications, and integrating Python libraries has equipped participants to design and implement efficient, scalable solutions. This program highlighted the growing importance of Python as a versatile, cloud-ready platform that enables developers to adapt to the fast-evolving technological landscape. Participants are now better prepared to harness Python's capabilities across diverse domains—from automating workflows and enhancing data analysis to creating intelligent applications and visualizing insights.

The program concluded with a call to continue exploring Python and pursuing further learning opportunities in this rapidly expanding field.

Photos:





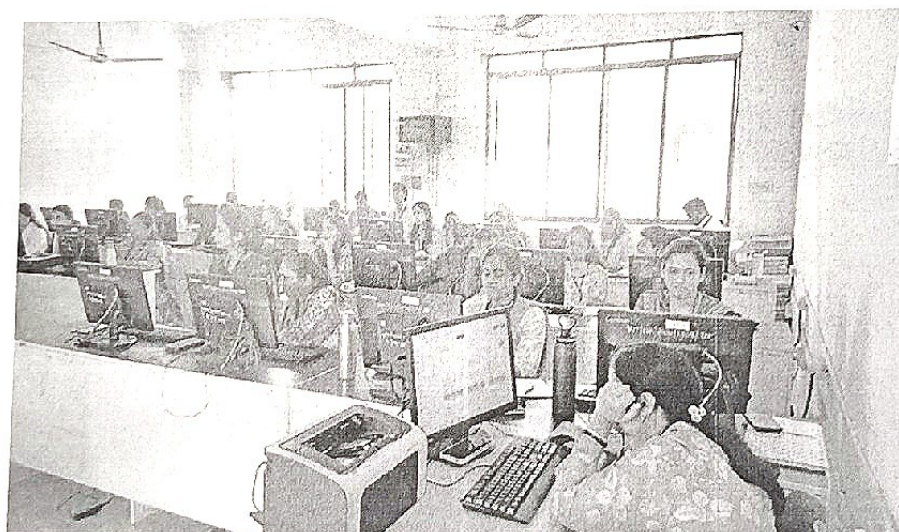
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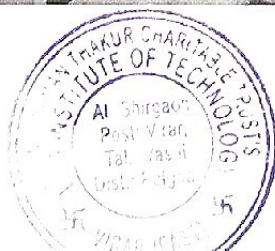


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Dr. Karishma Raut

IQAC Coordinator



Dr. Arun Kumar

Principal

HOD

MCA Dept

HOD

COMP Dept

HOD

ECS Dept

HOD

CSE AIML Dept

HOD

EXTC Dept