

TMY-DS01: Python for Data Science and Analytics

Course Code: TMY-DS01

Duration: 3 days

Instructor-led Training (ILT) | Virtual Instructor-led Training (VILT)

OVERVIEW

Python for Data Science and Analytics

Python has become the go-to language for data science, and this three-day course is designed to introduce beginners to the world of data analysis, visualization, and machine learning using Python. Participants will gain hands-on experience with Python libraries and tools essential for data science, empowering them to embark on a data-driven journey.

SKILLS COVERED

By the end of this course, participants will:

- Have a fundamental understanding of Python and its role in data science.
- Be proficient in using Python libraries such as NumPy, pandas, and Matplotlib for data manipulation and visualization.
- Be able to perform data analysis and cleaning tasks on real-world datasets.
- Be familiar with the basics of machine learning and be able to apply simple machine learning algorithms.
- Have completed practical projects and exercises to reinforce their learning.
- Gain the confidence to continue exploring and advancing their data science skills.

WHO SHOULD ATTEND?

- Beginner level courses for aspiring Data Scientist.

- Anyone who is interested in data science.

PREREQUISITES

There are no prerequisites required to attend this course.

MODULES

Module 1: Python Fundamentals for Data Science

- Introduction to Python: Syntax, variables, and data types.
- Control structures: If statements and loops.
- Functions and libraries in Python.
- Hands-on exercises: Basic operations.

Module 2: Data Manipulation and Visualization

- Introduction to pandas for data manipulation.
- Loading, exploring, and cleaning datasets with pandas.
- Introduction to NumPy for numerical data.
- Hands-on exercises.

Module 3: Introduction to Machine Learning with Python

- Data visualization with Matplotlib.
- Creating bar charts, scatter plots, and line charts.
- Hands-on project: Visualizing real-world data.
- Hands-on exercises
- Course wrap-up, Q&A, and next steps in the data science journey.

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