



PYTHON TRAINING

Mastering Python Analytics Course

Master Python for data analytics. Learn to manipulate, analyze, and visualize data effectively for informed decision-making.

DURATION

40 Hours

LEVEL

Intermediate

FORMAT

Instructor-Led

-
- Globally Recognized Certification
 - Expert-Led Hands-On Training
 - Flexible Scheduling

Computer Pride | 1st Floor, ICEA Building, Kenyatta Avenue, Nairobi | www.computer-pride.co.ke

COURSE OVERVIEW

The Mastering Python Analytics Course at Computer Pride is meticulously designed for professionals and aspiring data analysts who wish to harness the immense power of Python for advanced data analysis and interpretation. This intermediate-level program dives deep into the core Python libraries essential for analytics, including NumPy for numerical operations, Pandas for robust data manipulation and analysis, Matplotlib and Seaborn for compelling data visualization, and foundational concepts of machine learning with Scikit-learn. You will learn to clean, transform, analyze, and visualize complex datasets, transforming raw data into actionable insights that drive strategic business decisions.

Upon completion, participants will possess a highly sought-after skill set crucial for navigating today's data-driven landscape. This course goes beyond basic scripting, equipping you with the practical expertise to tackle real-world analytical challenges. By mastering Python's analytical ecosystem, you'll be prepared to contribute significantly to data-intensive projects, enhance problem-solving capabilities, and unlock new career opportunities in fields demanding sophisticated data interpretation and predictive modeling.

Duration	40 Hours
Level	Intermediate
Vendor	Python

COURSE CURRICULUM

01 Module 1: Python Fundamentals for Data Analysis Refresher

- Setting up your Python environment (Anaconda, Jupyter Notebooks)
- Review of Python data structures (lists, tuples, dictionaries, sets)
- Functions, control flow, and basic object-oriented concepts
- Introduction to efficient coding practices for data handling

02 Module 2: Data Manipulation with NumPy and Pandas

- NumPy arrays and vectorized operations
- Introduction to Pandas DataFrames and Series
- Loading and saving data (CSV, Excel, SQL databases)
- Data cleaning and preprocessing (missing data, duplicates, outliers)
- Data transformation (merging, joining, grouping, pivoting)

03 Module 3: Data Visualization and Exploratory Data Analysis (EDA)

- Static visualization with Matplotlib
- Enhanced and statistical plotting with Seaborn
- Creating interactive visualizations (introduction to Plotly/Bokeh)
- Techniques for exploratory data analysis
- Communicating insights through effective visual storytelling

04 Module 4: Statistical Analysis and Hypothesis Testing

- Descriptive statistics with Python
- Probability distributions and sampling
- Inferential statistics and hypothesis testing
- A/B testing concepts and implementation
- Correlation and regression analysis fundamentals

05 Module 5: Introduction to Machine Learning with Scikit-learn

- Overview of machine learning types (supervised, unsupervised)
- Feature engineering and selection techniques
- Linear Regression and Logistic Regression
- Decision Trees and Random Forests
- Model evaluation metrics and cross-validation

06 Module 6: Real-World Data Analytics Project

- End-to-end data analysis project design and execution
- Problem definition and data acquisition strategies
- Applying learned techniques to a complex dataset
- Presenting findings and actionable recommendations
- Best practices for project documentation and reproducibility

CAREER PATHWAYS

Graduates of this program are prepared for the following roles:

- > **Data Analyst**
- > **Business Intelligence Analyst specializing in Python**
- > **Junior Machine Learning Engineer (Data Preprocessing focus)**

FREQUENTLY ASKED QUESTIONS

Q: What are the specific prerequisites for enrolling in the Mastering Python Analytics Course?

To get the most out of this intermediate-level course, participants should have a foundational understanding of Python programming, including basic syntax, data types, control structures (loops, conditionals), and functions. While prior data analysis experience is beneficial, it's not strictly required, as the course will build from a solid Python programming base towards analytical applications.

Q: How will completing this course enhance my ability to make data-driven decisions in a professional setting?

This course is specifically designed to empower you with the practical skills to transform raw data into actionable insights. You'll learn to identify trends, clean messy datasets, perform statistical analyses, create compelling visualizations, and even build predictive models. These capabilities are crucial for informing strategic business decisions, optimizing operations, and identifying new opportunities within any organization.

Q: Will I work on a complete data analytics project as part of this course, and how will it prepare me for industry roles?

Absolutely. The course culminates in a comprehensive, real-world data analytics project where you will apply all the learned concepts from data cleaning and exploration to modeling and visualization. This hands-on experience is invaluable for building a portfolio, demonstrating your proficiency to potential employers, and gaining confidence in tackling end-to-end analytical challenges commonly faced in Data Analyst or Business Intelligence roles.

ABOUT COMPUTER PRIDE



East Africa's Premier IT Training Center

With over 15 years of excellence, Computer Pride delivers globally recognized certification programs from leading technology vendors. Located on Kenyatta Avenue in Nairobi's CBD, our state-of-the-art facilities and expert instructors have empowered thousands of professionals across East Africa.

15+

Years of Excellence

10,000+

Professionals Trained

50+

Vendor Certifications

READY TO ENROL?

Take the next step in your technology career.

Location

1st Flr, ICEA Building
Kenyatta Ave, Nairobi

Email

info@computer-pride.co.ke

Phone

+254 705 900 900

www.computer-pride.co.ke