



PYTHON TRAINING

Python For Data Science

Unlock data insights with Python. Learn to analyze, visualize, and apply machine learning models.

DURATION

2 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

Unlock the power of data with Computer Pride's intermediate 'Python For Data Science' course. This intensive program is meticulously designed to transform your Python skills into robust data analysis and machine learning capabilities. You will delve into the core libraries that form the backbone of modern data science, including NumPy for numerical operations, Pandas for data manipulation and analysis, Matplotlib and Seaborn for compelling data visualization, and Scikit-learn for fundamental machine learning algorithms. This course equips you with the tools to extract meaningful insights from complex datasets, identify trends, and make data-driven predictions. Upon completion, you will not only understand theoretical concepts but also gain practical, hands-on experience in real-world data science workflows. From data cleaning and preprocessing to exploratory data analysis and building basic predictive models, you will develop a comprehensive skill set highly sought after in today's data-centric economy. This course is ideal for individuals looking to pivot into data-focused roles or enhance their current analytical capabilities, providing a solid foundation for further specialization in AI, machine learning, or advanced analytics.

Duration	2 hours
Level	Intermediate
Vendor	Python

COURSE CURRICULUM

01 Module 1: Python Refresher and Data Science Foundations

- Review of Python programming essentials (data types, control flow, functions)
- Introduction to Data Science concepts and methodologies
- Setting up the Data Science environment (Anaconda, Jupyter Notebooks)
- Variables, Operators, and Expressions in Python

02 Module 2: Data Manipulation with NumPy and Pandas

- NumPy arrays: creation, indexing, slicing, and operations
- Introduction to Pandas DataFrames and Series
- Data loading from various sources (CSV, Excel)
- Data indexing, selection, and filtering techniques
- Handling missing data (NaN values) and data cleaning
- Data aggregation, grouping, and merging DataFrames

03 Module 3: Data Visualization with Matplotlib and Seaborn

- Fundamentals of data visualization and storytelling
- Creating basic plots with Matplotlib (line, bar, scatter, histogram)
- Customizing plots: titles, labels, legends, colors
- Advanced statistical plots with Seaborn (distribution plots, heatmaps, pair plots)
- Visualizing relationships between variables

04 Module 4: Introduction to Machine Learning with Scikit-learn

- Overview of Supervised vs. Unsupervised Learning
- Data preprocessing for machine learning (scaling, encoding categorical data)
- Introduction to Regression (Linear Regression model building)
- Introduction to Classification (Logistic Regression, Decision Trees)
- Model evaluation metrics (accuracy, precision, recall, F1-score)

CAREER PATHWAYS

Graduates of this program are prepared for the following roles:

- > **Junior Data Scientist**
- > **Data Analyst**
- > **Business Intelligence Developer (Python-centric)**

FREQUENTLY ASKED QUESTIONS

Q: What level of prior Python programming experience is recommended to successfully complete this 'Python For Data Science' course?

This intermediate course assumes you have a foundational understanding of Python programming, including basic syntax, data types (lists, dictionaries, tuples), control flow (if/else, loops), and defining functions. While Module 1 offers a refresher, prior hands-on experience with Python is highly beneficial to grasp the data science-specific concepts quickly and effectively.

Q: How will this course specifically prepare me to analyze real-world datasets and contribute to data-driven projects in a professional setting?

This course provides practical, project-based learning. You will gain hands-on experience using industry-standard libraries like Pandas for data cleaning and transformation, Matplotlib/Seaborn for exploratory data analysis, and Scikit-learn for building predictive models. You'll learn the workflow from raw data to actionable insights, enabling you to tackle complex analytical challenges and support data-driven decision-making in various business contexts.

Q: Does this course focus on theoretical data science concepts, or will I be building practical projects using Python libraries?

This course strongly emphasizes practical application. While key theoretical concepts are covered to ensure a deep understanding, the majority of the learning involves hands-on coding exercises, case studies, and mini-projects. You will be actively writing Python code using NumPy, Pandas, Matplotlib, Seaborn, and Scikit-learn to manipulate data, create visualizations, and build basic machine learning models, ensuring you develop tangible skills.

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