

# Python for Data Science & Automation

## COURSE OVERVIEW

This practical course bridges the gap between data analysis and operational efficiency by teaching participants how to use Python to solve real business challenges. The course is designed with a hands-on, project-based approach, focusing on the powerful libraries that make Python the leading language for data science and automation, empowering you to turn raw data into actionable insights and streamlined processes. Participants will learn to automate repetitive tasks, such as data collection and report generation, while simultaneously gaining the skills to analyze complex datasets, build predictive models, and create insightful visualizations.

## WHO SHOULD ATTEND?

This course is designed for business analysts, data analysts, financial professionals, marketers, researchers, and administrators who work with data and manual processes and want to leverage Python to enhance their analytical capabilities, automate workflows, and drive data-informed decision-making within their organizations.

## COURSE OUTCOMES

Delegates will gain the skills and knowledge to:

- Automate repetitive data processing and file management tasks.
- Clean, transform, and analyze large datasets using pandas.
- Create informative static and interactive visualizations.
- Build and evaluate basic machine learning models for prediction.
- Automate reports and deliver insights via PDF or dashboard.
- Extract data from websites, APIs, and databases.

## KEY COURSE HIGHLIGHTS

At the end of the course, you will understand;

- How to use core data science libraries like **pandas**, **NumPy**, and **Matplotlib** for data manipulation and visualization.
- Techniques to automate interactions with Excel, CSV files, and databases for efficient data pipelines.
- The process of building and interpreting machine learning models with **scikit-learn**.
- Methods for web scraping and API consumption to gather data automatically.
- Standard practices for writing clean, reproducible, and well-documented code for analysis and automation.
- How to integrate all skills to complete a capstone project that automates a data analysis workflow from end to end.

All our courses are dual-certificate courses. At the end of the training, the delegates will receive two certificates.

1. A GTC end-of-course certificate
2. Continuing Professional Development (CPD) Certificate of completion with earned credits awarded