Datastat Research
Building Capacity in Training and Research

DATASTAT TRAINING IN

OFFICIAL COURSE PROSPECTUS

Center for Advanced Research & Professional Development

Nairobi Training Center • Global Virtual Academy • Corporate On-Site

ACCOUNTING AND FINANCE

Financial Analytics Using Python Training Course

Comprehensive Course Syllabus, Practical Modules & Upcoming Schedules

PROGRAM SPECIFICATIONS & HIGHLIGHTS

DURATION
5 Days Practical Hands-on

DELIVERY MODES
In-Person Class & Live Virtual

CERTIFICATION
Accredited Certificate of Completion

INTAKES / DATES
Multiple Cohort Schedules Included

PREPARED FOR:

Valued Participant

Email: training@datastatresearch.org | Issued: November 24, 2026

Academic & Professional Training Year: 2026

DATASTAT TRAINING INSTITUTE

P.O. Box 102802-00101, Nairobi, Kenya

Training Centers: Nairobi • Mombasa • Kigali • Dubai • Live Virtual Academy

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www.datastatresearch.org

Financial Analytics Using Python Training Course

Accounting and Finance • 5 Days Intensive • Accredited Certification

Course Overview

Financial Analytics Using Python Training Course is designed to equip finance professionals with advanced technical skills in financial data analytics, Python programming, financial modelling, predictive analytics, and data-driven decision-making.

Key Skills & Software Tools Covered

MS Word • Python • Jupyter Notebook • and Microsoft Power BI

Upcoming Training Schedules

Confirmed cohort intakes and venues. Both physical in-person classroom and live virtual online seats are available.

TRAINING DATES	LOCATION / VENUE	FORMAT / DURATION	INVESTMENT (FEE)
30 Nov 2026 – 4 Dec 2026	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
7 Dec 2026 – 11 Dec 2026	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
14 Dec 2026 – 18 Dec 2026	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
21 Dec 2026 – 25 Dec 2026	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
28 Dec 2026 – 1 Jan 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
4 Jan 2027 – 8 Jan 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
11 Jan 2027 – 15 Jan 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
18 Jan 2027 – 22 Jan 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
25 Jan 2027 – 29 Jan 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
1 Feb 2027 – 5 Feb 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
8 Feb 2027 – 12 Feb 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
15 Feb 2027 – 19 Feb 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
22 Feb 2027 – 26 Feb 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
1 Mar 2027 – 5 Mar 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
8 Mar 2027 – 12 Mar 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
15 Mar 2027 – 19 Mar 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
22 Mar 2027 – 26 Mar 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
29 Mar 2027 – 2 Apr 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
5 Apr 2027 – 9 Apr 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
12 Apr 2027 – 16 Apr 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
19 Apr 2027 – 23 Apr 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
26 Apr 2027 – 30 Apr 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
3 May 2027 – 7 May 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**

10 May 2027 – 14 May 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
17 May 2027 – 21 May 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
24 May 2027 – 28 May 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
31 May 2027 – 4 Jun 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
7 Jun 2027 – 11 Jun 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
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2 Aug 2027 – 6 Aug 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
9 Aug 2027 – 13 Aug 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
16 Aug 2027 – 20 Aug 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
23 Aug 2027 – 27 Aug 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
30 Aug 2027 – 3 Sep 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
6 Sep 2027 – 10 Sep 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
13 Sep 2027 – 17 Sep 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
20 Sep 2027 – 24 Sep 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
27 Sep 2027 – 1 Oct 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
4 Oct 2027 – 8 Oct 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
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20 Dec 2027 – 24 Dec 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**

* Corporate discounts and customized cohort scheduling are available for teams of 3 or more participants.

Course Curriculum & Modules

Financial Analytics Using Python Training Course

Introduction

Financial Analytics Using Python Training Course is designed to equip finance professionals with advanced technical skills in financial data analytics, Python programming, financial modelling, predictive analytics, and data-driven decision-making. The course explores how Python libraries such as Pandas, NumPy, Matplotlib, Seaborn, and Scikit-learn can transform complex financial datasets into actionable business intelligence. Participants will develop practical competencies in financial data processing, automated reporting, investment analytics, cash flow forecasting, risk assessment, portfolio optimisation, and financial performance measurement. Emphasis is placed on artificial intelligence, machine learning, financial technology, and modern analytical techniques.

The programme also examines the application of Python in corporate finance, banking, investment management, financial planning, and risk management. Through practical exercises and international case studies, participants will learn to automate financial workflows, identify market trends, detect financial anomalies, and build predictive models that support strategic financial decisions. The training integrates real-world financial scenarios, interactive Python programming, and advanced visualisation techniques to strengthen analytical accuracy, operational efficiency, financial transparency, and organisational competitiveness.

Course Objectives

By the end of this course, participants will be able to:

- Apply Python programming to advanced financial analytics and reporting.
- Analyse complex financial datasets using modern data science techniques.
- Develop automated financial reporting and dashboard solutions.
- Apply predictive analytics to financial forecasting and planning.
- Perform investment analysis and portfolio optimisation.
- Implement machine learning techniques in financial decision-making.
- Evaluate financial risks using quantitative analytical models.
- Automate budgeting, cash flow analysis, and financial planning.
- Apply statistical modelling to financial performance measurement.
- Identify financial fraud and anomalies through data analytics.
- Develop data-driven strategies for corporate financial management.
- Use financial visualisation tools to communicate analytical insights.
- Strengthen financial intelligence through Python-based analytical solutions.

Organizational Benefits

- Improved financial reporting accuracy and efficiency.
- Reduced manual financial analysis and operational costs.
- Enhanced forecasting and budgeting capabilities.
- Stronger financial risk identification and management.
- Improved investment and portfolio management decisions.
- Increased productivity through automated financial processes.
- Better financial transparency and accountability.
- Enhanced fraud detection and financial controls.
- Improved strategic planning through predictive analytics.
- Stronger organisational competitiveness through data-driven decisions.

Target Audiences

- Chief Financial Officers and finance directors.
- Financial analysts and investment analysts.
- Accountants and management accountants.
- Banking and financial services professionals.
- Risk management and compliance officers.
- Financial planners and budget managers.

- Investment portfolio and asset managers.
- Data analysts and financial technology professionals.

Course Duration: 10 days

Course Modules

Module 1: Introduction to Financial Analytics and Python

- Fundamentals of financial analytics and data-driven finance.
- Python installation, environments, and programming fundamentals.
- Financial data types, structures, and analytical applications.
- Introduction to Jupyter Notebook and Google Colab.
- Financial analytics applications in modern banking.
- Case study: JPMorgan Chase's application of quantitative analytics.

Module 2: Python Programming for Financial Data Analysis

- Variables, functions, loops, and conditional statements.
- Working with financial datasets and data structures.
- Importing financial information from CSV and Excel files.
- Data cleaning, transformation, and validation.
- Automating repetitive financial calculations.
- Case study: HSBC's application of financial data automation.

Module 3: Financial Data Manipulation Using Pandas and NumPy

- Financial data manipulation using Pandas.
- Numerical financial computations using NumPy.
- Data filtering, sorting, merging, and aggregation.
- Analysing revenue, expenditure, and profitability datasets.
- Handling missing values and financial data inconsistencies.
- Case study: Amazon's financial performance data analysis.

Module 4: Financial Data Visualisation and Reporting

- Developing financial charts using Matplotlib.
- Interactive visualisation using Seaborn.
- Creating revenue, expense, and profitability dashboards.
- Financial trend analysis and performance indicators.
- Presenting financial insights through visual storytelling.
- Case study: Microsoft's financial performance visualisation.

Module 5: Financial Modelling and Quantitative Analysis

- Building financial models using Python.
- Time value of money and discounted cash flow analysis.
- Net present value and internal rate of return calculations.
- Sensitivity analysis and financial scenario modelling.
- Automating financial valuation processes.
- Case study: Tesla's investment valuation and financial modelling.

Module 6: Financial Forecasting and Predictive Analytics

- Financial forecasting techniques using historical datasets.
- Time-series analysis and trend identification.
- Revenue, expenditure, and cash flow forecasting.
- Applying regression models to financial predictions.
- Measuring forecasting accuracy and model performance.
- Case study: Walmart's demand and financial forecasting.

Module 7: Investment Analysis and Portfolio Optimisation

- Analysing stocks, bonds, and investment instruments.
- Calculating investment returns and volatility.
- Portfolio diversification and asset allocation.
- Applying modern portfolio theory using Python.
- Evaluating investment performance and benchmarks.
- Case study: BlackRock's quantitative investment management.

Module 8: Financial Risk Analytics and Management

- Identifying market, credit, and liquidity risks.
- Calculating Value at Risk and expected shortfall.
- Financial stress testing and scenario analysis.
- Developing quantitative risk assessment models.
- Monitoring financial exposure and risk indicators.
- Case study: UBS's financial risk management practices.

Module 9: Machine Learning Applications in Finance

- Introduction to machine learning in financial analytics.
- Supervised and unsupervised learning techniques.
- Applying Scikit-learn to financial datasets.
- Developing predictive financial classification models.
- Evaluating machine learning accuracy and reliability.
- Case study: PayPal's machine learning applications in financial services.

Module 10: Fraud Detection and Financial Anomaly Analysis

- Identifying suspicious financial transactions.
- Applying anomaly detection algorithms.
- Developing automated fraud detection models.
- Analysing transaction patterns and financial irregularities.
- Strengthening financial controls through predictive analytics.
- Case study: Mastercard's application of AI-powered fraud detection.

Module 11: Cash Flow, Budgeting and Financial Planning Analytics

- Developing automated cash flow forecasting models.
- Analysing operating and capital expenditure.
- Applying Python to budget variance analysis.
- Evaluating liquidity and working capital performance.
- Building financial planning and monitoring dashboards.
- Case study: Unilever's financial planning and performance management.

Module 12: Banking Analytics and Credit Risk Modelling

- Analysing banking transactions and customer financial data.
- Developing credit scoring models using Python.
- Assessing loan default probabilities.
- Applying logistic regression to credit risk assessment.
- Evaluating lending performance and credit portfolios.
- Case study: Capital One's credit risk analytics.

Module 13: Financial Automation and Algorithmic Trading

- Automating financial calculations and reporting workflows.
- Introduction to algorithmic trading principles.
- Analysing historical market prices using Python.
- Developing and backtesting trading strategies.
- Evaluating trading performance and risk exposure.

- Case study: Renaissance Technologies' quantitative trading approach.

Module 14: Financial Data Governance, Security and Ethics

- Financial data governance and regulatory compliance.
- Data privacy and cybersecurity in financial analytics.
- Managing sensitive financial information.
- Addressing bias in predictive financial models.
- Ensuring transparency and accountability in automated decisions.
- Case study: European banking institutions and GDPR compliance.

Module 15: Advanced Financial Analytics Project and Practical Applications

- Integrating Python libraries into financial analytics projects.
- Developing comprehensive financial analysis dashboards.
- Building predictive financial performance models.
- Presenting financial insights and strategic recommendations.
- Evaluating analytical outcomes and implementation challenges.
- Case study: Developing an integrated financial analytics solution using publicly available financial data from Apple.

Training Methodology

- Instructor-led presentations and interactive discussions.
- Practical Python programming demonstrations and exercises.
- Real-world financial analytics projects and simulations.
- International financial case studies and group assignments.
- Hands-on financial modelling and predictive analytics.
- Individual assessments, feedback, and practical presentations.

Register as a group from 3 participants for a Discount

Send us an email: info@datastatresearch.org or call +254724527104

Certification

Upon successful completion of this training, participants will be issued with a globally- recognized certificate.

Tailor-Made Course

We also offer tailor-made courses based on your needs.

Key Notes

a. The participant must be conversant with English.

b. Upon completion of training the participant will be issued with an Authorized Training Certificate

c. Course duration is flexible and the contents can be modified to fit any number of days.

d. The course fee includes facilitation training materials, 2 coffee breaks, buffet lunch and A Certificate upon successful completion of Training.

e. One-year post-training support Consultation and Coaching provided after the course.

f. Payment should be done at least a week before commence of the training, to DATASTAT CONSULTANCY LTD account, as indicated in the invoice so as to enable us prepare better for you.

Certification & Learning Methodology

- Hands-on practical delivery with real-world datasets, case studies, and lab exercises.
- Post-training mentorship, access to class resources, and customized follow-up support.
- Participants who successfully complete the course receive an accredited Datastat Certificate of Completion.

How to Enroll & Reserve Your Seat

1. Online Registration: Visit https://datastatresearch.org/courses/financial-analytics-using-python-training-course to register online.
2. Email Booking: Send participant details to training@datastatresearch.org for official invoice & reservation.
3. Support & Assistance: Inquire via phone +254 724 527 104 | +254 734 969 612.