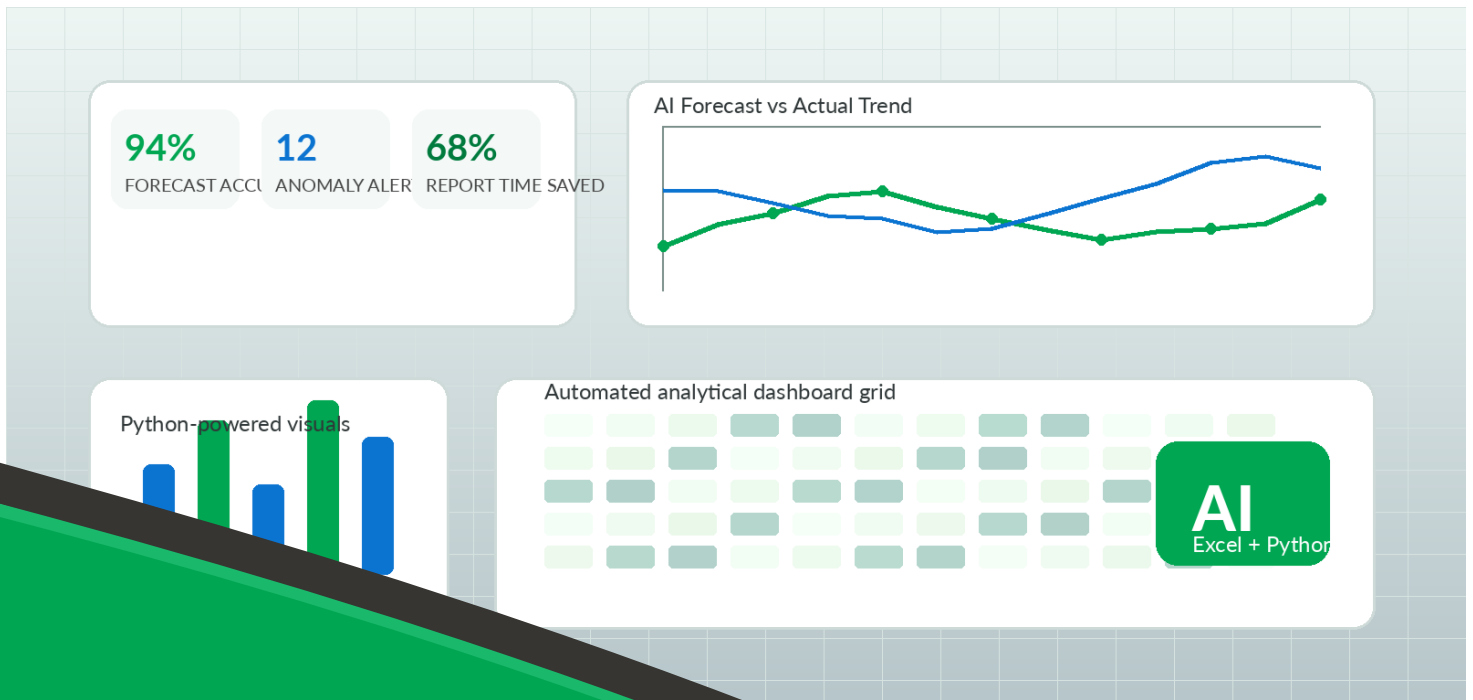




Building AI-Powered Dashboards with Python in Excel

Unleashing Advanced Dashboard Analytics with AI and Python in Excel

2-Day Intensive Training Course

No Prior Python Experience Required

Available: Johannesburg | Live Online | In-House

Public Course Dates

27 - 28 August 2026 | Johannesburg or Live Online

19 - 20 October 2026 | Johannesburg or Live Online

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Why Choose this Training Course?

Excel is no longer just a static spreadsheet. This course shows analysts how to combine Excel, AI-assisted workflows and Python in Excel to automate reporting, process larger datasets, forecast outcomes and produce dashboard narratives for better decisions.

The Analyst's Dilemma: Problems We Solve

- Reduce manual copying, formatting and report preparation.
- Move from rearview dashboards to predictive insights.
- Analyse larger datasets without the usual spreadsheet slowdown.
- Consolidate analytics, modelling and dashboarding inside Excel.
- Use AI to create plain-English summaries for executives.

What are the Goals?

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

- Integrate Python and AI into Excel workflows.
- Automate data ingestion, cleaning, analysis and visualization.
- Build executive-ready dashboards using Excel interactivity and Python analytics.
- Generate forecasts, scenario analysis and what-if simulations.
- Use AI to detect patterns, anomalies and insight narratives.
- Complete a practical AI-powered dashboard project.

Who is this Training Course for?

This course is designed for data-driven professionals who want to elevate their analytical toolkit, automate dashboards and produce deeper, faster insights from familiar Excel environments.

This course is suitable for:

- Business Intelligence Analysts
- Financial Planners and Analysts (FP&A)
- Data Analysts
- Marketing and Sales Analysts
- Operations and Supply Chain Analysts
- HR Analytics Specialists
- Risk and Compliance Professionals
- Management Consultants
- Managers responsible for reporting and dashboards

How will this Training Course be Presented?

The course uses a hands-on, applied learning approach combining conceptual explanations, live demonstrations, guided exercises, case studies and practical dashboard development projects. Participants build capabilities progressively, culminating in a complete AI-powered analytical dashboard in Excel.

System Requirements & Preparation

- Microsoft 365 Excel with Python in Excel capability.
- Access to Microsoft Copilot in Excel is highly recommended.
- Internet connection for Python in Excel and AI features.
- Basic Excel knowledge - tables, formulas and charts.
- No prior Python programming experience required.

The Certificate

ICL Certificate of Completion for delegates who attend and complete the course.

The Course Content

DAY ONE: Foundations of AI-Driven Analytics in Excel

MODULE ONE: The Evolution of Excel Analytics

- From spreadsheets to analytics platforms
- Why static dashboards no longer meet modern decision needs
- How AI and Python are changing business analytics workflows
- Becoming an intelligent analyst rather than a spreadsheet operator

MODULE TWO: Understanding the AI-Powered Excel Ecosystem

- Python in Excel architecture and capability overview
- AI-assisted analytics tools and dashboard workflows
- Building data pipelines inside Excel
- Data cleaning options using AI tools
- Using Power Query for automated data preparation

MODULE THREE: AI-Assisted Analysis

- Using AI tools to explore datasets
- Generating insights automatically
- Creating initial visualizations with AI assistance
- Turning analytical results into business questions and narratives

DAY ONE: Advanced Data Analysis and Visualization

MODULE FOUR: Advanced Data Processing with Python

- Data transformation using Python libraries
- Working with structured datasets
- Feature engineering for analysis
- Trend analysis and relationships in data
- Correlation and performance driver analysis

MODULE FIVE: Advanced Visualization Techniques

- Creating Python-powered visualizations
- Building charts beyond standard Excel capabilities
- Customizing analytical visuals for decision-makers
- Embedding Python outputs into Excel dashboards

MODULE SIX: Time-Series Analysis and Forecasting Fundamentals

- Identifying seasonality and trends
- Moving averages and smoothing techniques
- Forecasting fundamentals for dashboard outputs
- Interpreting trends for management action

MODULE SEVEN: Anomaly Detection and Early Warnings

- Identifying outliers in datasets
- Monitoring unusual patterns
- Creating early warning indicators for performance management
- Flagging issues for faster management response

Hands-On Lab

Set up an AI-assisted Excel analytics workflow and prepare the first dashboard-ready dataset.

The Course Content

DAY TWO: AI-Powered Dashboard Design and Automation

MODULE EIGHT: Integrating Analytics into Excel Dashboards

- Embedding Python visualizations
- Linking analysis outputs to Excel dashboards
- Creating dynamic analytical components
- Structuring dashboards for reporting cycles

MODULE NINE: Principles of Advanced Dashboard Design

- Designing dashboards for decision-making using AI
- Visual hierarchy and layout strategies
- KPI design and performance indicators
- Designing dashboards that tell a clear analytical story

MODULE TEN: Predictive Analytics in Excel

- Forecasting models for business decisions
- Monte Carlo simulations
- Scenario analysis and what-if simulations
- Using predictive outputs in executive dashboards

MODULE ELEVEN: Automating Analytical Workflows

- Automated data refresh
- Reproducible analytics pipelines
- Reducing manual reporting effort
- Building repeatable reporting workflows for teams

MODULE TWELVE: AI-Assisted Insight Generation

- Using AI to interpret results
- Automated narrative summaries
- Enhancing executive reporting
- Turning technical analysis into clear recommendations

CAPSTONE PROJECT: AI-Powered Dashboard Development

Participants with appropriate setups will build a complete dashboard that includes:

- Data ingestion and preparation
- Python-based analytics
- Automated visualizations
- Interactive dashboard components
- AI-generated insights
- Presentation of dashboard and expert feedback

Expected Outcomes

After completing the programme, participants will be able to:

- Build advanced dashboards that combine Excel, AI and Python.
- Perform complex data analysis directly inside Excel.
- Automate reporting and analytical workflows.
- Develop interactive dashboards for executive decision-making.
- Integrate AI-assisted analytics into everyday business processes.

Practical Learning Focus

Delegates leave with a working dashboard framework and a practical understanding of how AI, Python and Excel combine for modern reporting.

Important Note

No prior Python experience is required.

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Date	Venue / Delivery Mode	Face-to-Face Fee (Excl. VAT)	Live Online Fee (Excl. VAT)
27 - 28 August 2026	Johannesburg or Live Online	R8 500.00	R5 999.00
19 - 20 October 2026	Johannesburg or Live Online	R8 500.00	R5 999.00
On Request	Client premises / virtual	Quotation on request	Quotation on request

All fees are exclusive of VAT. Face-to-face fee includes course documentation, lunch and refreshments.

☐ Face-to-Face Training ☐ Live Online Training ☐ In-House / Customised Training

Please use BLOCK CAPITALS to fill in this form. Read all information carefully before starting to complete the form.

PARTICIPANT DETAILS (1)

Last Name: _____ First Name: _____
Position: _____ Company: _____
Telephone: _____ Email: _____

PARTICIPANT DETAILS (2)

Last Name: _____ First Name: _____
Position: _____ Company: _____
Telephone: _____ Email: _____

PARTICIPANT DETAILS (3)

Last Name: _____ First Name: _____
Position: _____ Company: _____
Telephone: _____ Email: _____

PARTICIPANT DETAILS (4)

Last Name: _____ First Name: _____
Position: _____ Company: _____
Telephone: _____ Email: _____

AUTHORISATION

Authorised By: _____
Position: _____ Company: _____
Postal Address: _____
Telephone: _____ Email: _____ Date: _____ Signature: _____