



CENTRAL BANK OF EGYPT  
Egyptian Banking Institute

# Fundamentals of Data Analysis with Python



International Programs



10571



In-Class



8 hours



Registration Deadline

**16-Aug-2026**

Early Bird Registration  
Deadline

**2-Aug-2026**

## Course Description:

This course offers a practical introduction to the use of Python in data analysis, utilising real ticker data. Throughout the finance industry, we've seen a surge in Python use for data analysis. It is quickly becoming the preferred tool, as Python:

- Is a general-purpose programming language
- Is more intuitive to read with clear and simple syntax that resembles English
- Speeds up automated tasks
- Handles much larger volumes of data
- More functional and robust than Excel workbooks
- Faster in doing difficult calculations
- Easier to learn than VBA
- Simpler to reproduce and audit work

In addition, the Python ecosystem contains many open-source libraries which can help analysts and developers within the financial services industry.

## Target Audience:

This course is ideal for financial analysts, business analysts, portfolio analysts, quantitative analysts, risk managers, model validators, quantitative developers and information systems professionals. No prior coding experience is necessary. Those who want to harness the power of the growing amount of data available, and move beyond using Excel to analyse large financial datasets and begin using the Python programming language to clean, analyse and visualise complex financial data.

## Course Objectives:

- Understand the basic Python Ecosystem, and compare tools such as Jupyter Notebooks with MS Excel
- Practical introduction to the use of Python in data analysis, with examples of speed and efficiency gains beyond MS Excel.
- Understand the main Python tools used for preparing and analysing data from multiple sources within the financial markets

- Extend base Python via packages, including NumPy and Pandas and Matplotlib, and how they apply to Data Analysis and Data Visualization within finance
- Apply descriptive and summary statistics using the Python programming language
- Produce basic visualizations in Python to empower the communication of data analysis findings
- Understand how to turn data into actionable insights

## Course Outline:

### 01-The Python programming language

Understand the base Python programming language.

- What is Python?
- Why is Python so prevalent?
- Why use Python in Finance?
- What are Jupyter Notebooks?
- Code Cells vs Markdown Cells
- Python's Syntax
- Variables and Types
- Basic Input / Output
- Code Indentation
- Code Commenting
- Collections (aka Containers)
- Mutable vs. Immutable
- Ordered vs Unordered
- Lists
- Dictionaries
- Operators
- Conditional statements and Loops
- Functions: User Defined Functions
- Modules: writing simple python programs, sharing code, importing code



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## 02-Python Project

- A hands-on coding project using a case study in the financial/banking domain.

## 03-Introduction to Data Analysis with Python

Understand how to extend base Python by utilising data analytical libraries

- Python libraries
- How to install a library
- How to use the official documentation
- Introduction to Numerical Computing
- The NumPy library
- Data Structure: Arrays
- Statistical Calculations
- Introduction to Data Analysis
- The Pandas library
- Data Structure: Series vs DataFrames
- DataFrame vs spreadsheet
- How to read in CSV data
- Sub setting a DataFrame
- Generate descriptive statistics
- Visualize time-series data utilizing the Matplotlib library

## Assessment Strategy:

NA

## Course Language:

English

## Prerequisites:

This programme does not require any previous specific learning.

## Technical Requirements

- Have "64-bit Python 3.# Anaconda Distribution" preinstalled or have "read write access" to be able to install during the course.

## Trainers' Bio

**Maya** is a full-time credit trainer at Fitch Learning in Dubai, specializing in corporate credit, corporate finance, and ESG. She joined Fitch after a decade of experience in corporate banking, credit risk, and wealth management. Maya previously worked at a multi-family office in Geneva and as a senior credit risk practitioner at Audi Bank, Lebanon. She holds a bachelor's degree in economics & finance, a Global MBA from the Lebanese American University, and a certificate in commercial real estate analysis from MIT.

**Elena** is a corporate credit specialist with over a decade of experience in credit analysis, ratings, accounting, and auditing. She trains on topics such as financial statement analysis, credit risk assessment, business plan evaluation, and ESG integration. Previously Vice President at ION Group – Served Rating Agency, Elena evaluated corporate creditworthiness and worked in financial due diligence at KPMG. She is a Chartered Accountant and Statutory Auditor with a master's in economics and business.

**Ilgiz** joined Fitch Learning as a credit risk trainer in 2023. He specializes in corporate credit, debt capital markets, leveraged finance and derivatives. Prior to Fitch Learning, Ilgiz worked for over 20 years in the banking industry, including in front office and risk management roles at financial institutions, such as Bank of America Merrill Lynch, Fortis Bank, KBC, and First Abu Dhabi Bank. He has trained and coached credit analysts globally and covers industries such as Manufacturing, Commodities and Petrochemicals. Ilgiz holds an MBA from the Cranfield School of Management.

**Belinda Green** is an experienced corporate banker and credit risk trainer. Following a banking career spanning 20+ years working for leading corporate and investment banks globally, she pivoted into financial training in 2014. She joined Fitch Learning as a full-time faculty member in 2023 after several years as Associate faculty. Belinda has extensive experience in designing and delivering credit programs across EMEA. Her areas of expertise include credit risk and cash flow analysis, loan structuring and documentation, identifying and managing problem loans, credit reasoning and writing, and loan portfolio management. Belinda holds a B. Com (Legal) from the University of the Witwatersrand.