Python-III Course for Financial Analysis University of Karachi

Weeks	***Topics***
1	Introduction to Financial Analysis Why Python is most popular for Financial Analysis? Data Sciences Laboratory and Essential Python Packages Statsmodel, Numpy, Pandas & Matplotlib
2	Importing the data and working with Data Frames Pandas for Reading and Analyzing the Stock Data Creating Features & Variables in Data Frame
3	Building a simple Trading Strategy Measuring Risks of Investing in a Stock
4	Models of Stock Return & Distribution Analyzing the Distribution of log daily Return with Python
5	Basic concept of Statistical Interference Practical Cases of Confidence Interval and Hypothesis Testing Testifying the claims of investment return
6	Linear Regression Models for Financial Analysis Performance of a Stock Trading model using Major Financial Indicators Multiple Linear Regression - Generate a signal-based trading strategy
7	Evaluating the Performance of a Model with Statistics Standards Sharpe Ratio and Maximum Dropdown using Practical Python
8	Algorithm Trading Mega Projects Enabling Computers to make Investment Decisions
9	Microsoft Excel Crash Course for Finance professionals Real world examples and Formulae
10	Importance of the Taught Course and meetup through Professionals Finance Automation Mega Projects

Course Outcomes:

Python is now becoming the number 1 programming language for data science. Due to python's simplicity and high readability, it is gaining its importance in the financial industry. The course combines both python coding and statistical concepts and applies into analyzing financial data, such as stock data.

By the end of my teaching, you can achieve the following using python:

- Import, pre-process, save and visualize financial data into pandas Dataframe
- Manipulate the existing financial data by generating new variables using multiple columns
- Recall and apply the important statistical concepts (random variable, frequency, distribution, population and sample, confidence interval, linear regression, etc.) into financial contexts
- Build a trading model using multiple linear regression model
- Evaluate the performance of the trading model using different investment indicators

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