

## **Mini Project 1- Stock Market Analysis Using Python**

**Business Scenario:** Data Science extracts meaningful insight from chunks of raw data, which is useful to different business segments for planning their future course of action. Finance is probably one of the first to catch on to this trend with a rise in the penetration of analytics into many aspects of our lives. Here, we will analyze data from the stock market for some technology stocks such as Apple, Google, Amazon, and Microsoft.

**Objective:** Use Python libraries such as Pandas, Seaborn, and Matplotlib to extract and analyze the information, visualize it, and look at different ways to analyze the risk of a stock, based on its performance history.

**About the Data:** The stocks we have chosen are from various industries and market caps namely,

- Apple
- Google
- Microsoft
- Amazon

For the start, we shall investigate the Amazon stock individually and then move on to the combined analysis.

To know more about stocks and their data please visit the below link:

<https://in.finance.yahoo.com/>

The following tasks are to be performed:

- Read the Data from Yahoo finance website directly.
- Perform cleaning.
- What was the change in stock price over time?
- Visualize the change in a stock's volume being traded, over time?
- What was the moving average of various stocks?
- What was the daily return average of a stock?
- Add a new column 'Trend' whose values are based on the 'Daily Return'.
- Visualize trend frequency through a Pie Chart.
- What was the correlation between the daily returns of different stocks?