**First Project: Project 1 stage 1**

Preparing a Statistical report capturing Live data for stock prices of major US companies like

Apple, Tesla etc. to study the behaviour of the company stock.

DATA SCIENCE BATCH-2023

Project 1

DATE:11-09-2023

Date of submission:17-09-2023

Project Description

Given here are the live data stock values of 3 major companies Microsoft, Apple and Tesla. Their live data have been extracted from the website of Yahoo finance .The Dataset Contains their stock values between 2018 till 2023 on daily basis. The dataset also contain S8P 500 values as well during the same time period Here the percentage change in stock values has been calculated for each stock and is presented in the table as %change variable. Standardized names have been assigned automatically like MS%chng.

SP 500 is a stock market index tracking the stock performance of 500 large companies listed on stock exchanges in the United States including (Microsoft, Apple, Tesla, etc.).

According to Capital Asset Pricing Model, the slope coefficient Beta in a simple regression of the excess return on the stock(ex. app%chng) vs. the stock return on the market(S&P%chng) is a measure of relative risk of the stock.

Stocks with higher Betas are more risky and therefore should have higher returns in the market.

Project Task:

1. download the dataset.
2. Make a comparative descriptive statistic on the price value of each stock displaying charts to show the trend of each stock between (2018-2023).
3. Include charts like scatter plot ,histogram etc to show the price trend of the stock value.
4. Include the values of descriptive stats like mean, median, std deviation etc.
5. Make a regression model over the percentage change in stock(ex app%chng) vs market return on the stock(S&P%chng) for each company.
6. Compare the value of Beta to show the progress of the stock and the risk value involved

**Submission Guidelines:**

Step # 1: Submit the task in the Google Form

Step# 2: Create an explanatory video to showcase your effort. You could use voice over or typed text to explain your effort & post it over Linkedin.

Step # 3: Mention @Oeson & #OGTIP, while posting your task on LinkedIn. Also give a brief while recording the task video.

Step # 4: Comment on the task of your peers participating in the same batch.