STOCK PRICE PREDICTION (USING DATA SCIENCE)

PROBLEM DEFINITON

- The objective of this problem is to predict the prices of the stocks using historical market data.
- It helps the stock traders or the stock investors predict the activity of the market so they know when to sell stock shares for a profit and when to buy them at a discount and it minimizes their losses to a great extent.

- Predicting stock prices involves various processes like
  - Data collection
  - Data preprocessing
  - Feature engineering
  - Model selection
  - Model training
  - Evaluation

DESIGN THINKING

- DATA COLLECTION:
  - It involves collecting historical stock market data.
- DATA PREPROCESSING:
  - Handling missing data and converting categorical features into numerical features (for example: each stock can be categorized in terms of its investment style as a growth stock or a value stock.

- FEATURE ENGINEERING:
  - Creating additional features to enhance the predictive power of the model.

- MODEL SELECTION:
  - Selecting suitable algorithms for time series forecasting.

- MODEL TRAINING:
  - Train the chosen model with the preprocessed data.
- EVALUATION:
  - Evaluating the model’s performance using time series forecasting metrics.