**STOCK PREDICTION PROJECT USING MECHINE LEARNING**

1. **Overview**:
   * The goal is to predict stock prices using historical data.
   * Two models will be used: Linear Regression and KNN Classifier with GridSearchCV.
   * The dataset used is the Tata Global Beverages dataset containing historical stock prices.
2. **Steps Involved**:

a. **Data Preparation**:

* + Load the dataset (Tata Global Beverages dataset).
  + Perform exploratory data analysis (EDA) to understand the data, check for missing values, and visualize trends.

b. **Feature Engineering**:

* + Extract relevant features for prediction (e.g., open price, close price, volume, etc.).
  + Split the data into features (X) and target variable (y).

c. **Model Training**:

* + Train a Linear Regression model on the dataset.
  + Train a KNN Classifier using GridSearchCV to find the best hyperparameters.

d. **Model Evaluation**:

* + Evaluate the models using appropriate metrics such as accuracy, mean squared error (MSE), etc.
  + Compare the performance of the Linear Regression and KNN Classifier models.

e. **Prediction**:

* + Make predictions using both models on a test dataset or unseen data.
  + Evaluate the accuracy of the predictions.

1. **Result**:
   * Obtain accuracy scores for both the Linear Regression and KNN Classifier models.
   * Compare the accuracy scores to determine which model performs better for stock price prediction.
2. **Conclusion**:
   * Summarize the findings and insights from the project.
   * Discuss the strengths and weaknesses of each model.
   * Provide recommendations or insights based on the results obtained.