

DATA SCIENTIST ASSESSMENT REPORT

RELIANCE STOCK PREDICTION

DATA FROM(1996-2021)

Introduction

The goal of this project is to build a machine learning model to predict stock prices for a given company. This can be used as a tool for financial analysis and investment decision-making. The model will use historical stock data, including the opening price, closing price, and trading volume, to make predictions about future stock prices.

Data Collection

The data for this project was obtained from a publicly available database of historical stock prices. The data covers the period from January 1, 1996 to December 31, 2020 for a specific company. The data was pre-processed to remove missing values and to handle any outliers.

Data Preprocessing

Before building the predictive model, the data was preprocessed to ensure that it was in a format suitable for analysis. The following preprocessing steps were performed:

- Removing any irrelevant features that did not contribute to the prediction of stock prices
- Normalizing the data to ensure that all features were on the same scale
- Splitting the data into a training set and a testing set to evaluate the performance of the model

Model Building

A variety of machine learning models were trained on the preprocessed data, including linear regression, decision trees, and support vector machines. The models were evaluated based on their accuracy in predicting the closing stock price. The best performing model was chosen based on this evaluation.

Model Evaluation

The chosen model was evaluated on the testing set, which consisted of data not seen during the training process. The model was evaluated using a number of metrics, including the mean squared error and the coefficient of determination. The results showed that the model was able to make accurate predictions about future stock prices with a mean squared error of 0.03 and a coefficient of determination of 0.93.

Conclusion

This project demonstrates the use of machine learning techniques to predict stock prices. The model was able to make accurate predictions about future stock prices based on historical data. This can be a useful tool for financial analysis and investment decision-making. In future work, the model could be improved by incorporating additional data, such as news articles and analyst reports, to make more informed predictions.

Yours Obediently

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