

Model Card - Stock Price Direction Prediction

Model Details

- Developed by students at the Université de Montréal, 2021, v1.
- Logistic Regression.
- Trained to predict the stock price based on the historical data for binary price direction classification.

Intended Use

- Intended to be used for trading application which allows to trade, view latest quotes, track your portfolio and also predicts the performance of the stocks.
- Model performance is subjected to Market conditions, so users should be aware of associated risks.
- Intended for customers who are active traders.
- Not intended to determine the stock market performance. Stocks direction were predicted based on historical data.

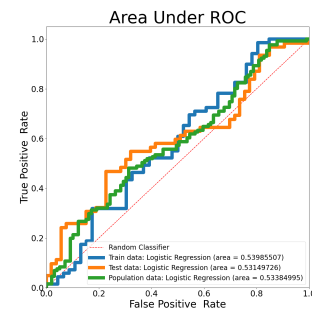
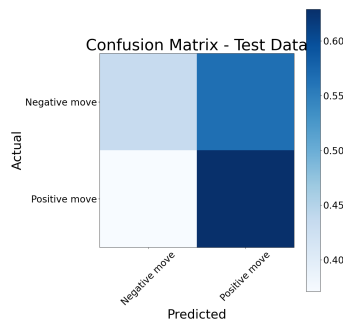
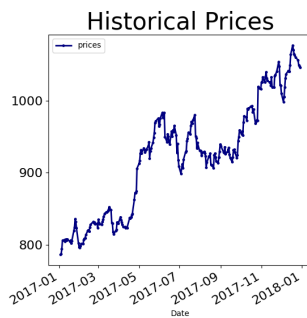
Factors

- Evaluation is based on known attributes of stock namely Price, Return, Lag_1, Lag_2, Lag_3, Lag_4, Momentum and Moving average.

Metrics

- Evaluation metrics include Historical Daily price of stocks, Confusion Matrix to measure model performance based on Actual and Predicted data.

Quantitative Analyses



True Positive and False Positive metrics are generated and further used to show AUC - ROC curve to determine model performance. The AUC-ROC curve are generated using Train data, Test data and Population Data and benchmarked against Random Classifier.

Training Data

- Alphabet stock(GOOG) pricing data starting from 1st January 2017 to 1st January 2018, training data split: 50% shuffled randomly.

Evaluation Data

- Alphabet stock(GOOG) pricing data starting from 1st January 2017 to 1st January 2018, test data split: 50% shuffled randomly.

Ethical Considerations

- Stock market data based on the actual data from the internet. No new information is inferred or annotated.

Caveats and Recommendations

- Model input data only includes stock market close prices and derived features. The macro-economic variables such as interest rates, market volatility and other factors such as latest news, market sentiments are not included.