

NYSE

Modeling Predictive Performance

S&P 500

Net Cash Flow

COMPANY DATA

Annual SEC Filings

2012 - 2016

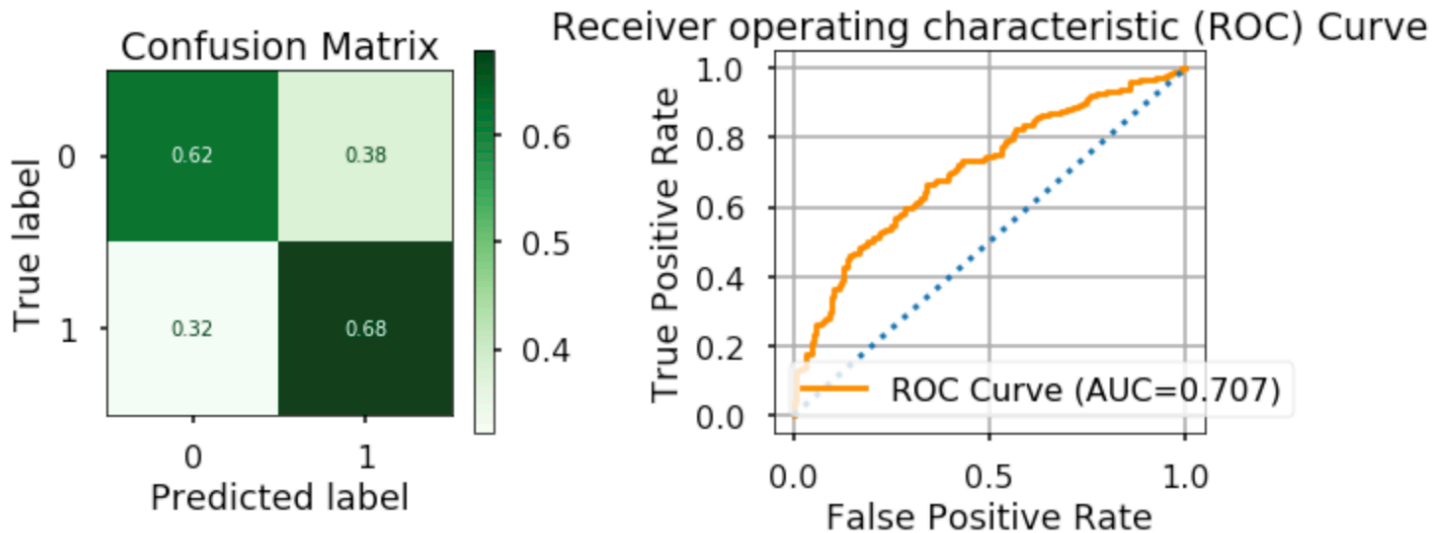


Which features increase predictive power on Positive Net Cash Flow?

Models Used

- **Decision Trees** are a type of Supervised Machine Learning (that is you explain what the input is and what the corresponding output is in the training data) where the data is continuously split according to a certain parameter.
- This model tests all the different features of the data to see which are best to split with a number of different approaches – resulting in feature importance.

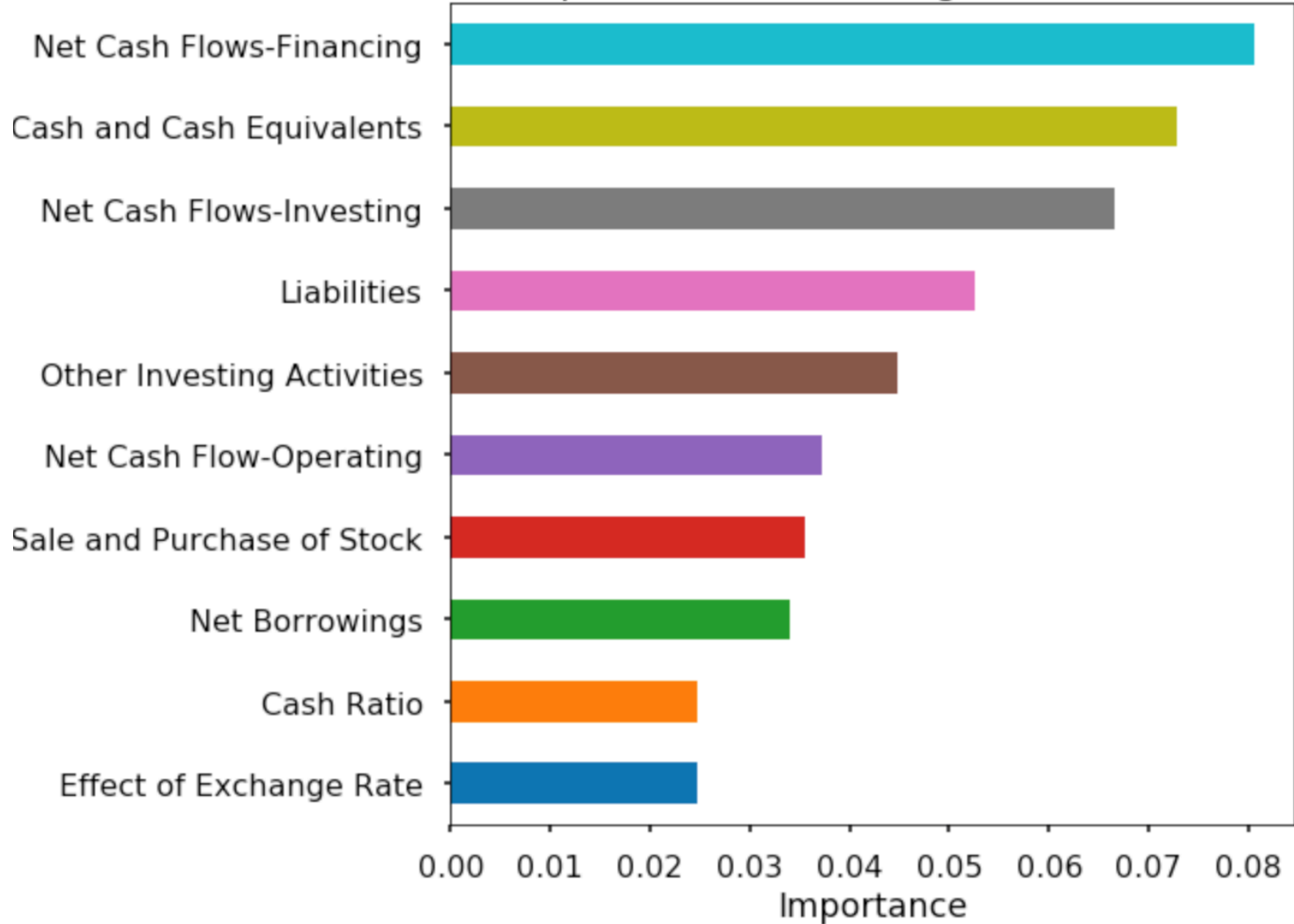
Accuracy of model



62% chance of a correct positive net cash flow prediction

58% chance of a correct negative net cash flow prediction

Feature Importance for Modeling Positive Net Cash Flow



Recommendations

- Financing and borrowings together with sale and purchase of stock influence the net cash flow.
- Large operating costs can result in a low net cash flow.
- The accuracy of this model has above average balance for both positive and negative net cash flow prediction.
- This model may result in a very small percentage of companies listed with strong predictions.

Future Work

- One day ahead prediction with rolling linear regression
- Indicator data including for example Momentum and Moving Average values on stock price
- Categorizing of data / Further classification of companies depending on industry
- Further modeling algorithms on the data to find a stronger predictive performance

THANKYOU

Presented by Sue Mir 07/May/2019