



Better Millennium

Investment Technology Solution

Presenter



Xibei (Julian) He

Senior Quantitative Analyst

Flatiron Capital

Agenda

- **Business Understanding**
- **Executive Summary**
- **Data Overview**
- **Product Features**
- **Limitations**
- **Further Development**

Business Understanding



Business Understanding



Growing Force



Frustration

31% vs. 9% before age 21

80% quit in 2 years

67% own stock

1% profitable

Business Understanding

Stakeholder

All the Retail Investor

Problem

assist investor to make
better decision

Goal

Create Prediction and
Model Portfolio to
navigate market





Executive Summary

RMSE: 1.25

Beat the market by 2%

Rely on Prediction

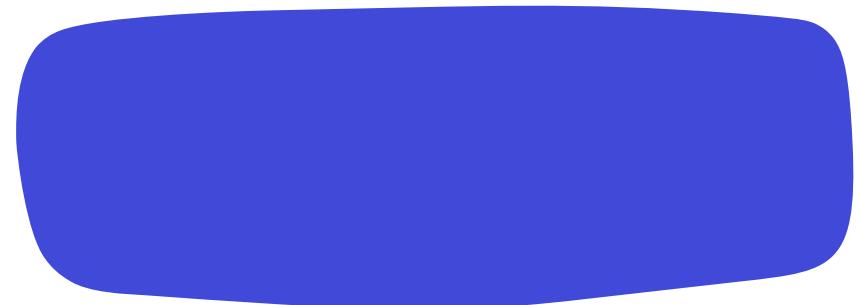




DATA

Data Overview

Data Overview



Daily Returns past 10 years



500-2700+ records

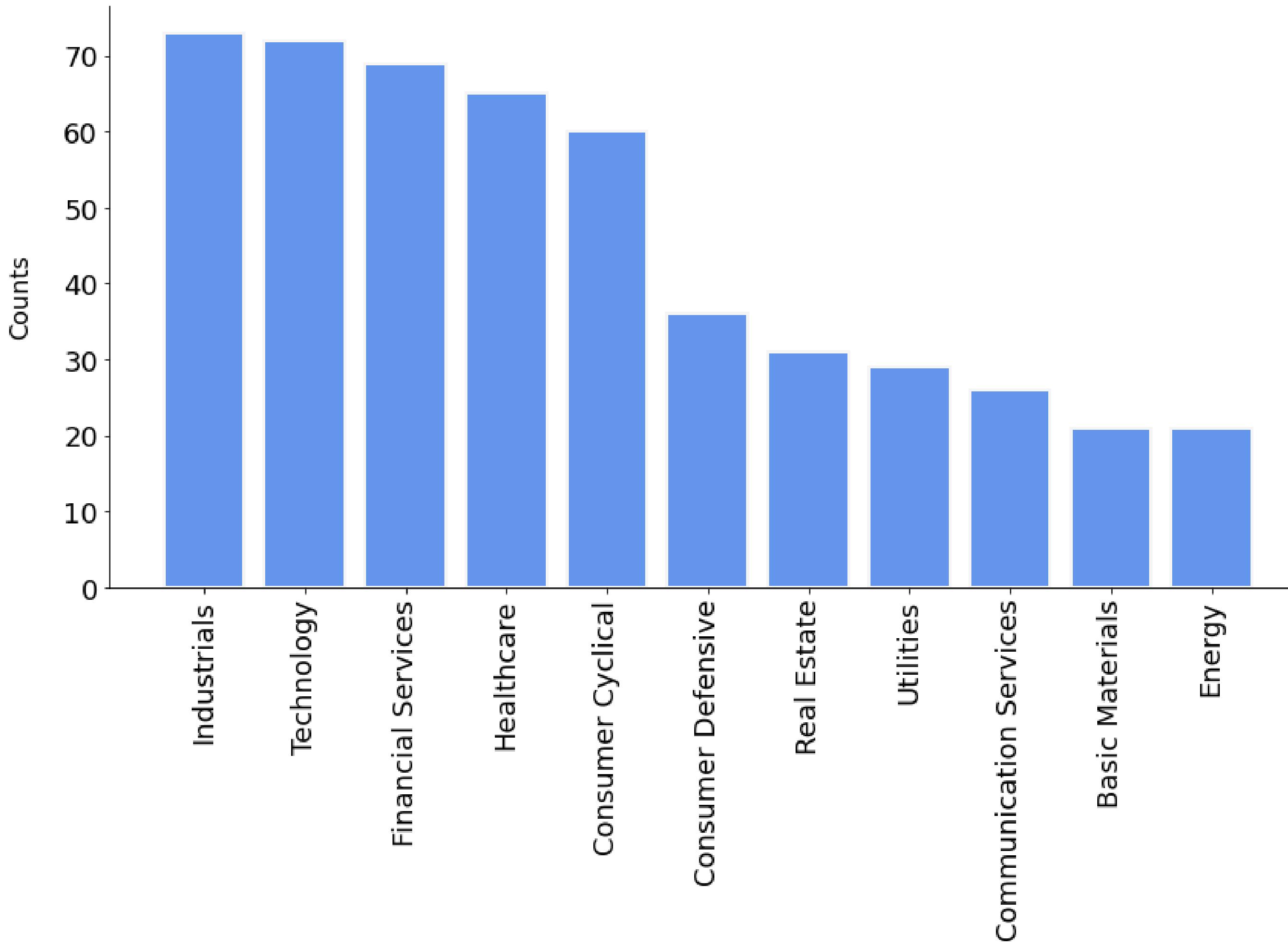


Major Holdings in S&P 500

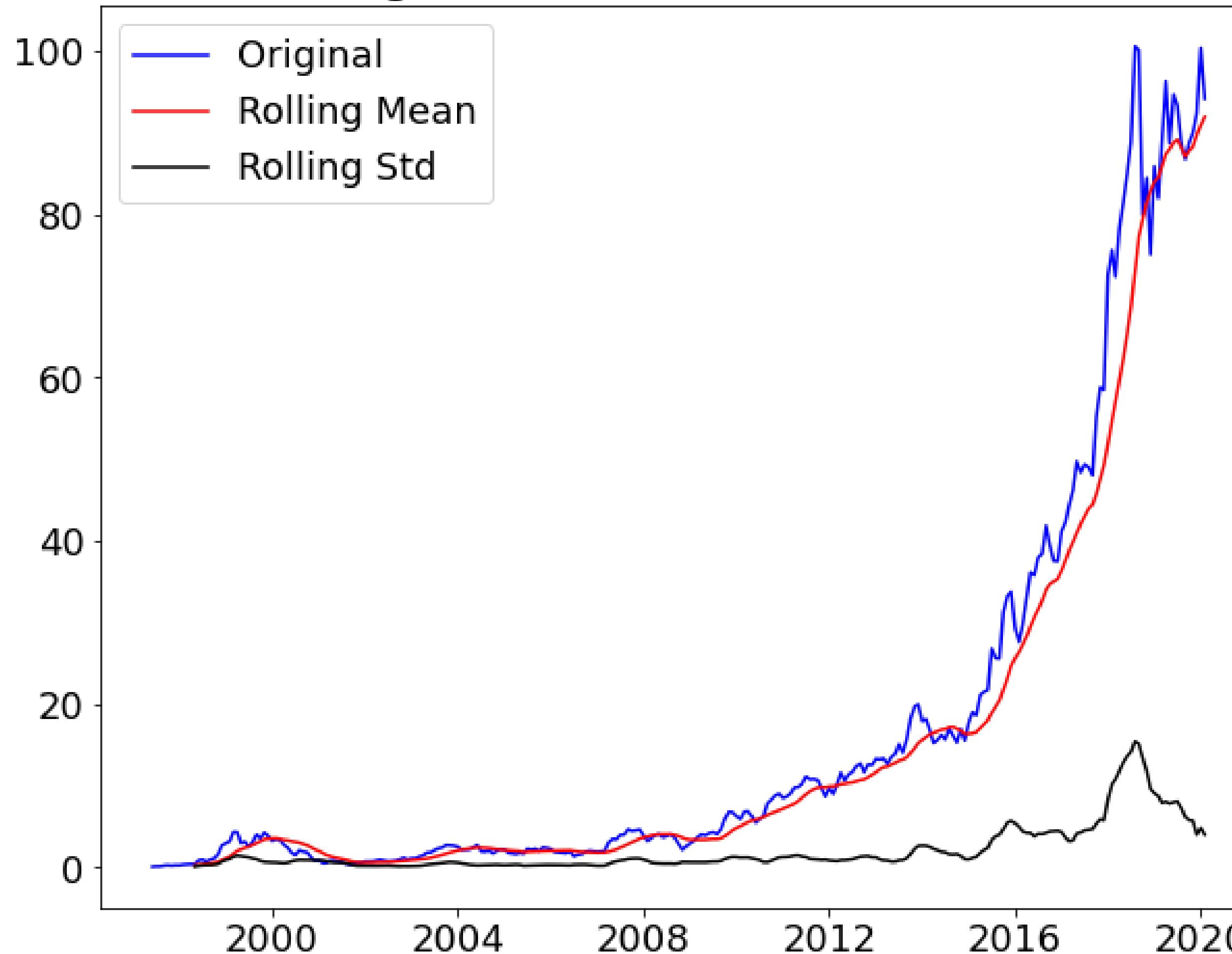


EDA

Most Concentrated Industry in S&P500



Rolling Mean and Standard Deviation





Product Presentation

Better Millennium



Prediction

XGBoost

RMSE: 1.25

Model
Portfolio

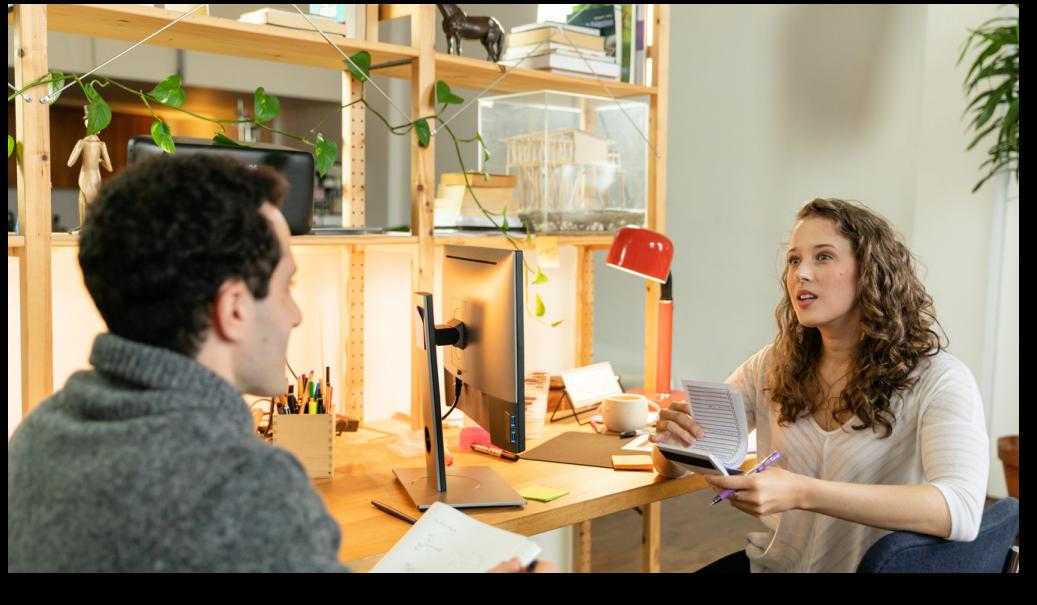
Min-Variance

Optimized

Price Prediction

Zoom in to test set





Price Prediction

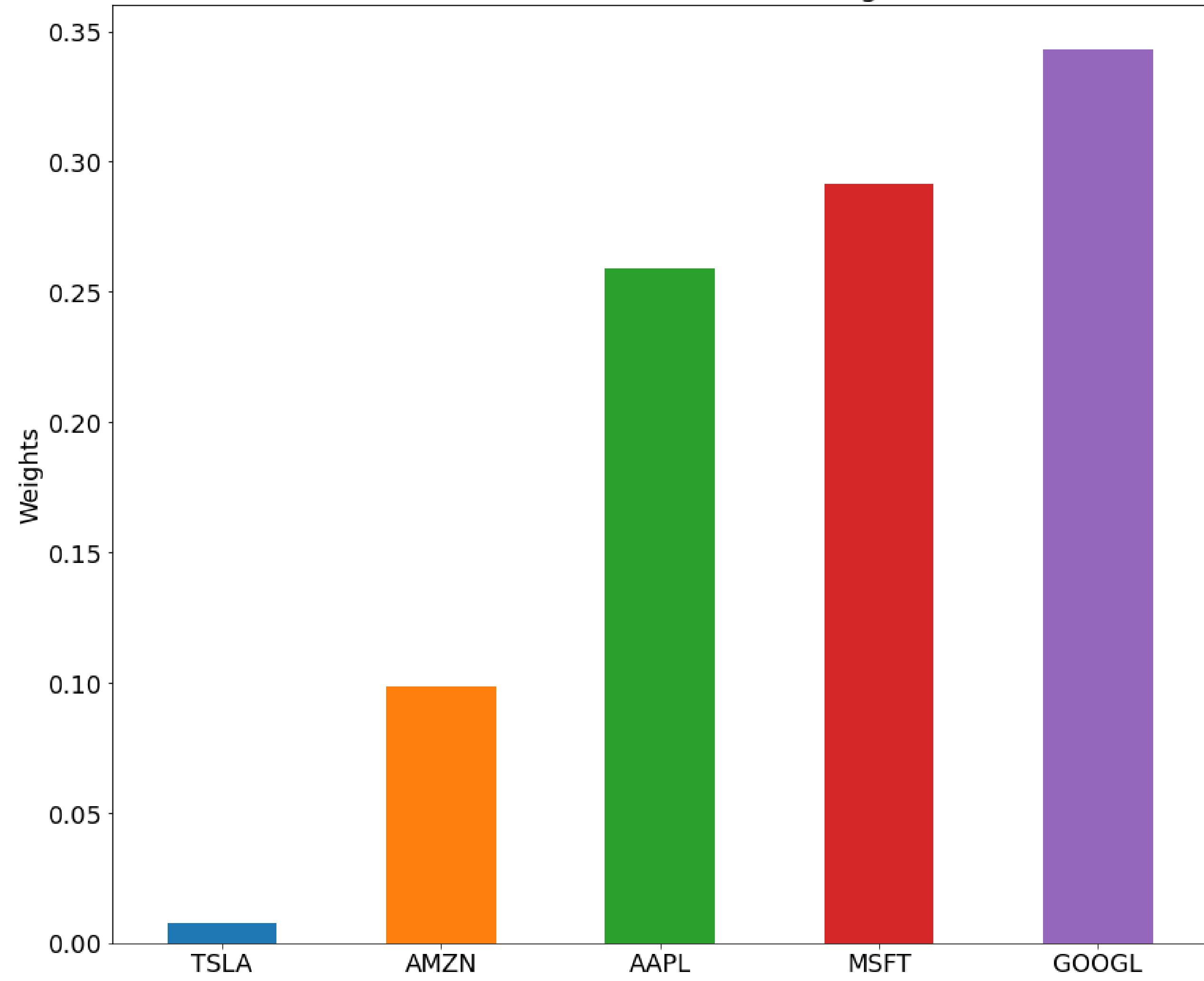
Zoom in to test set





Minimum Variance Portfolio weights

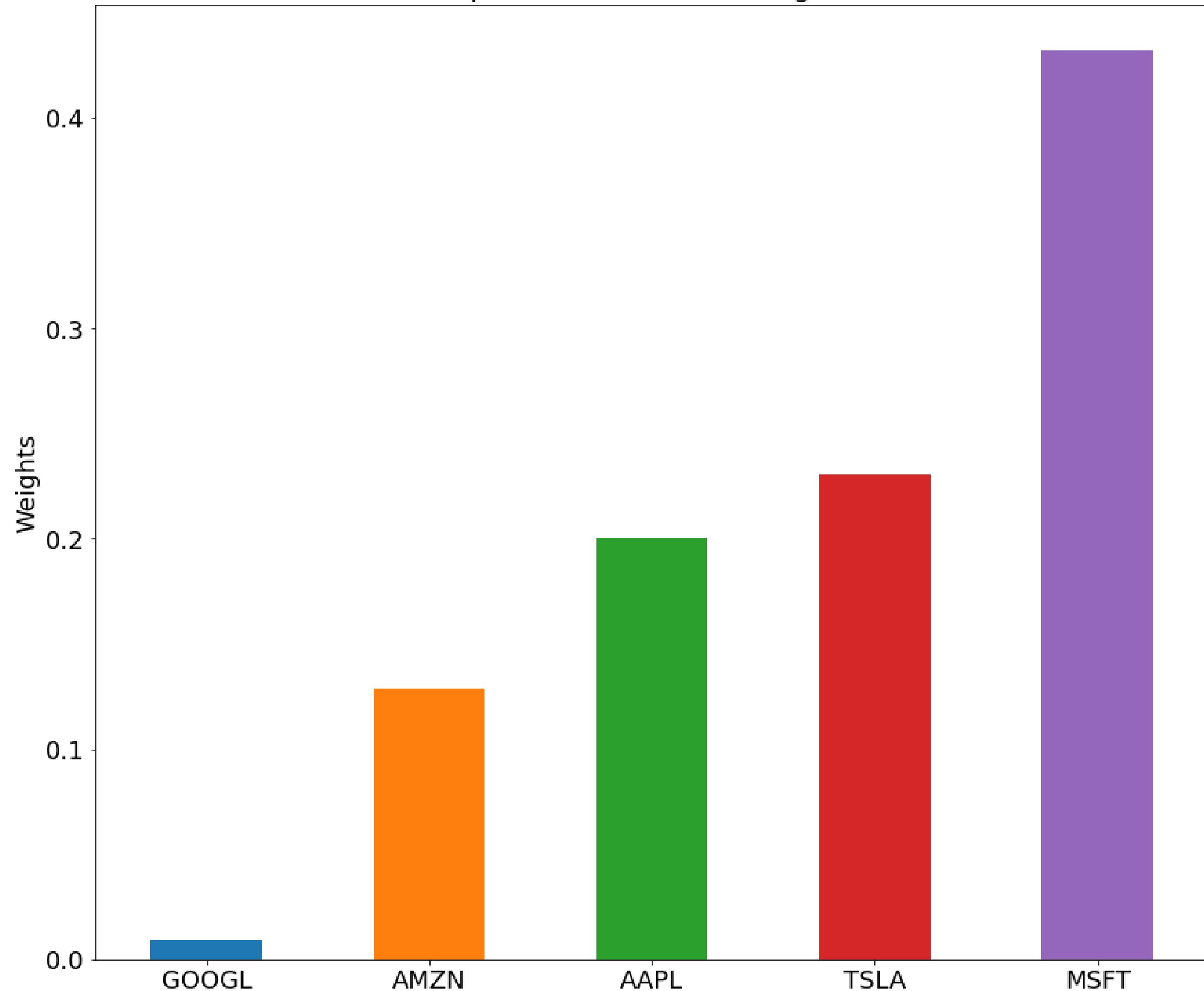
Model Portfolio I





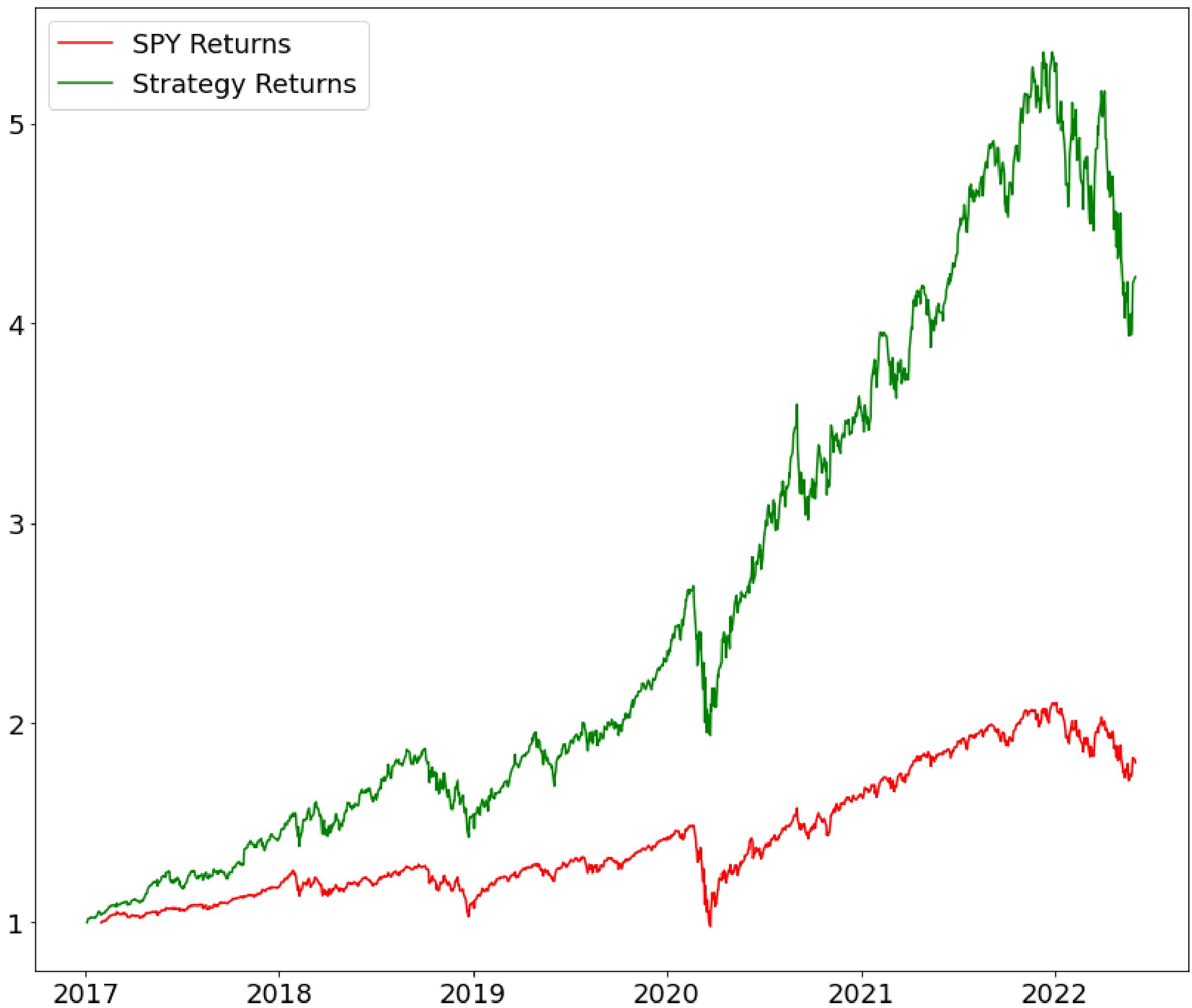
Optimized Portfolio weights

Model Portfolio II





Model Portfolio Return



Limitations



Limitations

Access to
important
data

XGB sensitive
to outlier

Price
prediction is
much more
complicated
process

Further Development



Further Development

Recommendation System

Better Algorithm: LSTM



Thank you! Q&A



Github



julianhe1991@gmail.com



Linkedin