Analyzing Stock Performances

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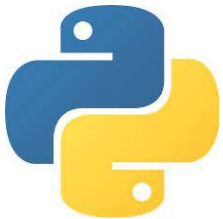
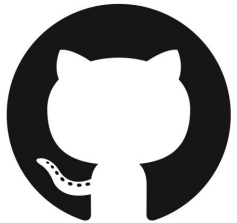
Introduction

- Dataset and tools
- Related work
- Proposed work
- Evaluation
- Milestones
- Questions

Dataset and Tools

- S&P 500 companies
- Recent years and big events
- Python
- Jupyter Notebooks
- GitHub





Related Work

- Hudson River Trading
  - Hudson river trading is a firm located in New York that specializes in algorithmic trading of stocks through rigorous analyses and attempting to predict future price movements based on live data.
- J.A.R.V.I.S
  - JARVIS is similar to Hudson River Trading, however the software utilized runs on top of the TradingView platform to give the user a more hands-on experience versus a company doing the trading for you.
- Our approach
  - Utilizing current and past stock data in order to gain a better understanding of the market

Proposed Work

- Develop a way to organize and analyze historical and current stock data
  - By utilizing Python with various libraries we are able to effectively organize and analyze data in an efficient manner
- Grow our knowledge on the market
  - Through analyzing past and current data, we are able to gain an understanding into what factors into a market crash and when a market is considered a bear or bull market
- Rudimentary algorithmic trading
  - Create a basic algorithm to perform fictitious trading by utilizing various factors such as past market performance and earnings reports

Evaluation

- Work can be evaluated by observing if our algorithm successfully predicts the actual change in the market.
- Metrics for evaluation will be the accuracy or error of our predictions, especially when compared to that of other prediction algorithms.
- We can compare our work with other prediction models and algorithms such as J.A.R.V.I.S and Hudson River Trading
- We can compare our work with the standard trading trends in the market
- We can compare our work with random guesswork

Milestones

- Study other trading algorithms and models (Week 7)
- Collect past and current stock data (Week 10)
- Project Checkpoint Report (Week 12)
- Study and mine data for patterns, trends, outliers, etc. (Week 13)
- Create a predictive model/algorithm based off patterns and trends from mined data (Week 15)
- Final Project Report (Week 16)

Questions?