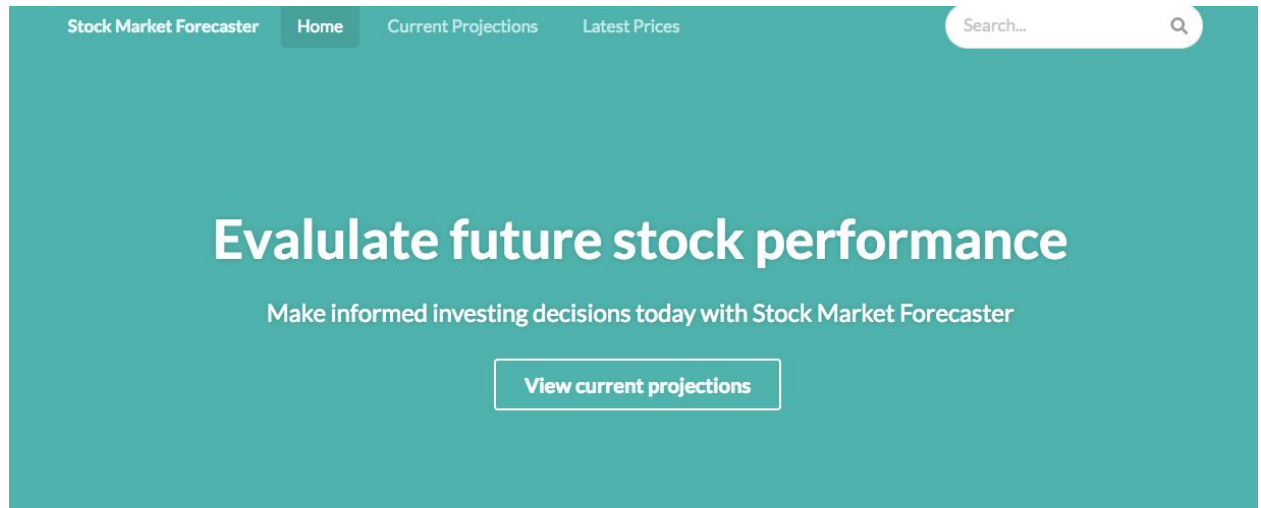Capstone Project CS467
November 30, 2018
Draco:WEB8 - Stock Market Forecasting
Instructions Document

Daniel Beckham
James Fitzwater
Bridget McGinn

Our code: https://github.com/beckhamd/draco-web08
Our website: https://draco-web08.appspot.com/

When the user accesses our webpage (https://draco-web08.appspot.com/) they have an easy to navigate splash page which immediately gives them the option to view current projections as machine learning was the primary objective for this website. They can also navigate to the current projections or latest prices using the navigation bar at the top of this home page:
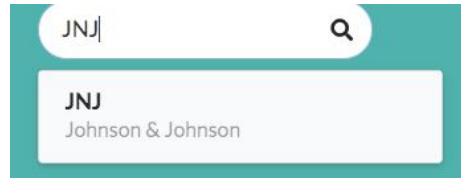

This URL is https://draco-web08.appspot.com/predictions and brings the user to this interface:

Symbol ▲	Name	Price	Change	Percent Change	Volume
AAPL	Apple Inc.	179.55	-1.39	-0.77% ↓	41,460,299
AXP	American Express Company	111.31	-1.58	-1.40% ↓	4,248,038
BA	The Boeing Company	342.56	9.06	2.72% ↑	5,278,738
CAT	Caterpillar Inc.	130.23	-0.54	-0.41% ↓	4,926,732
CSCO	Cisco Systems, Inc.	47.34	0.05	0.11% ↑	22,523,730

On this page, they can view the expected price in 50 days for each stock, the change in price from the current price, and the percent change.

Users can either click on a stock in the list or search in the search box for stocks. It will populate with available stocks contained in the database for display. Using the search function to locate a stock, for example JNJ, and clicking the box that opens below it (shown below)

takes one to the individual stock's home page. This page can be accessed here:

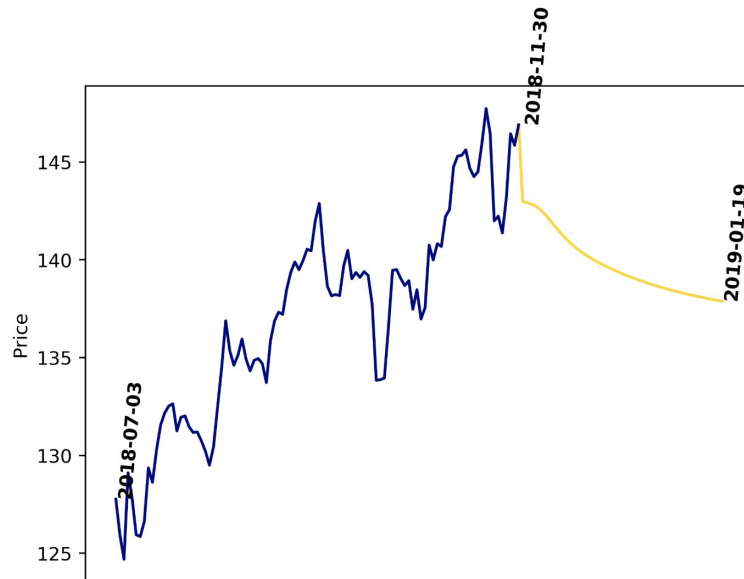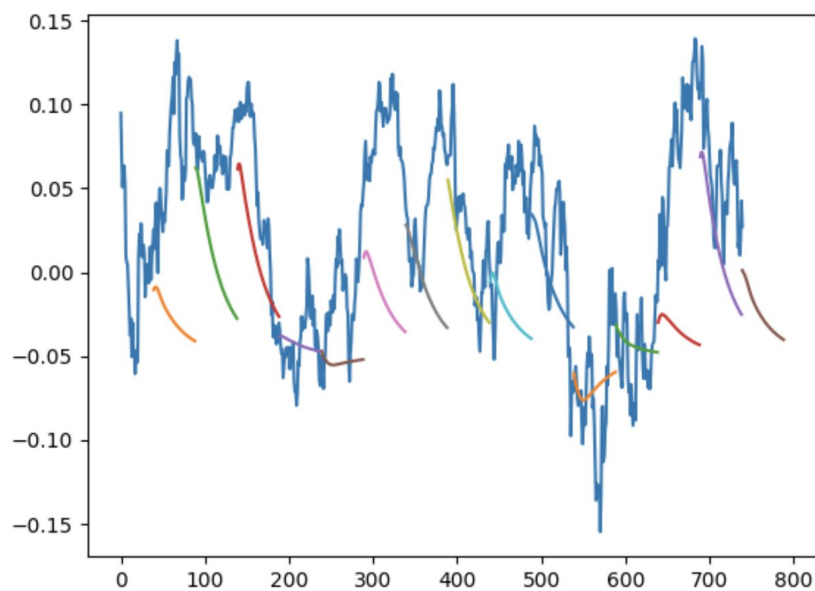https://draco-web08.appspot.com/stocks/JNJ

On this page, one can zoom in-and-out by scrolling over the graph, hover over the green line to receive Simple Moving Average information, and hover over the red line to receive Exponential moving average information. The volume on each day appears as a bar graph below the stock price line graph.

Beneath that users can see a pyplot generated graph with the predicted stock price 50 days out from the present day.

Price Prediction

Scrolling further down on the same page, users can see PNGs of plots made on pyplot with our training data (around the last 700 days' data). The actual data (normalized between -1 and 1) is overlaid to view the accuracy of the testing portion of the results. Last, the prediction of the stock, which is demonstrated in the brown projection line below (right-hand side of the graph):

Next, one can click on the Latest Prices page, which loads the page below:

| Stock Market Forecaster | Home | Current Predictions | Latest Prices | JNJ | 🔍 |

Symbol ▲	Name	Last Price	Change	Percent Change	Volume
AAPL	Apple Inc.	178.58	-0.97 ↓	-0.54%	39,531,549
AXP	American Express Company	112.27	0.96 ↑	0.86%	3,949,667
BA	The Boeing Company	346.76	4.20 ↑	1.23%	5,373,981
CAT	Caterpillar Inc.	135.67	5.44 ↑	4.18%	8,458,179
CSCO	Cisco Systems, Inc.	47.87	0.53 ↑	1.12%	41,619,082
CVX	Chevron Corporation	118.94	0.09 ↑	0.08%	6,712,604
DIS	The Walt Disney Company	115.49	-1.12 ↓	-0.96%	16,857,777
DJI	Dow Jones Industrial Average	25,538.461	199.62 ↑	0.79%	482,249,445
DWDP	DowDuPont Inc.	57.85	0.61 ↑	1.07%	13,688,647
GS	The Goldman Sachs Group, Inc.	190.69	-4.16 ↓	-2.13%	6,219,958

On this page, the user can see the latest price, price change, percent change, and daily volume. The user can also click on any stock listed to be brought to the stock's home page. Thar page can be accessed at this URL: https://draco-web08.appspot.com/prices