Thomas Pinto

Prof. Mukund

EE 551 - Python Programming

12/18/2020

Stock Market Data Analyzer

For the final project in 551 I wanted to work with stock market data and learn more about the analysis that can be done in python, as well as further my understanding of plotting packages. My future is going to be heavily involved with financial analysis and stock performance. While reasonably proficient in R, I was less experienced with python code to complete similar tasks. To begin this project I needed a data source of trustable stock market information. Yahoo finance was the source for this reliable info, and a nice python package called *finance* can be imported to retrieve that data. To make the project personalized I included a simple introduction and request for a stock ticker. The program then checks if the ticker is viable by comparing it against the imported csv dataframe containing the list of symbols. Once a match is found the program then uses the yahoo finance package to grab data for the ticker from yahoo. Basic variables are established at the start of the program to control the range at which the data is grabbed and the frequency. These are all aspects of the *.history* call from the same package. Another ease of use function which is offered by the yahoo package is the *.recommendations* function, which offers different recommendations for the stock from a few organizations. This, and the stocks price history can be seen in the terminal when the program is executed.

The last portion of this project is surround visualizations in python. This was done using resources from online as a guide, and the stock price over the last 6 months is able to be seen. While this feels somewhat basic, it offered a decent exposure to the working of the *matplotlib*

package offered in python. As a whole, this project will allow me to easily pull up and view trending stocks simply by their ticker. Other financial websites offer this functionality, but it was educational to build something similar for myself. Looking to the future, I was hoping to explore some UI interfaces offered by python to allow a user to change variables in an interface rather than behind the scenes in the .py file.

Sources for Project:

https://s3.amazonaws.com/assets.datacamp.com/blog_assets/Python_Matplotlib_Cheat_Sheet.pdf

https://stackoverflow.com/questions/11185781/how-do-i-check-if-an-input-is-in-a-list-in-python

https://towardsdatascience.com/how-to-get-stock-data-using-python-c0de1df17e75

https://www.datacamp.com/community/blog/python-matplotlib-cheat-sheet