

Doug Dellolio

November 22, 2015

### Writing Assignment 3

There are many programs in existence today that do different types of analysis on stocks. It is not hard to find one that will look at factors such as day volume, the amount of shares traded in a day, and predict based on past days what today will bring. One of the main drivers of a stock price is media and in particular social media. Media has a great impact on whether the price of a stock moves up or down. Companies listed on any exchange will publish press releases regularly to inform the public about events or products. After a press release is published, the price of the stock can move in any direction as a reaction by shareholders and traders. Buying and selling stocks should not be a difficult thing to do. To a beginner, investing your earned money is a scary idea to comprehend. What is even scarier is deciding what company to invest in for a decent return. This application aims to help alleviate these fears by providing an easy to use and easy to learn dashboard for both new and advanced traders to invest money. When you first run the application, there is only one textbox and button. You simply type in the stock symbol you are interested in and all of the analysis is done for you in a matter of minutes. Since we have found that there is a correlation between press releases and social media and the movement of stock price, all analysis is done using these factors. For the more advanced users, a prediction center is available to determine the probability a stock may move up or down based on certain words and phrases. Analyzing the data includes several components which will be further explored in this paper. The application will use a few libraries, but the main one being Lingpipe. Lingpipe is a tool kit for processing text using computational linguistics. Lingpipe is currently used in other major products including a program used by the U.S Dept. of Defense called ThreatTracker. In fact, more than 200 government analysts were trained in the use of this program and the government trusted it to detect threats in certain forms of communication. As stated previously, there already exists programs that have different complex mathematical approaches to determine what a stock price will do. It can be concluded that these methods

do not work because nobody has mastered the market yet. Taking a different and unique approach to reading the market and predicting it is something that this application will try to accomplish.

This application holds a lot of economic potential. There are about 48% of Americans that are invested in the stock market today according to bankrate.com. So what is the reason that there are so many people invested in the market? The simple answer is money. Over time, the idea is that if you invest in a company, there will be a positive return on your money because of the events that take place inside the company. Companies that go public usually trade on specific exchanges. These exchanges act as a market where stock buyers connect with stock sellers. Some of the most commonly known exchanges include the New York Stock Exchange (NYSE) and NASDAQ. When a company goes public, they agree to certain requirements set by the U.S. Securities and Exchange Commission. As a requirement for the NYSE, these companies agree to release all information to its investors and make it public at certain times. This application will take that information and analyze it. Therefore, the targeted audience includes anybody investing in the market. As people use it and see the valuable information given to them, they will likely share their successes with friends and family so that they can also achieve great returns. As the user base grows, the application can build as a whole to include more features. There are already other ideas that will be implemented in the future including comparisons between companies and press releases as well as chat features for ideas to be shared. In order to implement these useful features in a timely manner, a development team would have to be established. When looking at the potential this application can bring, there not only exists large monetary gain for the company itself, but there exists an educational value as well. The importance of education is a goal that this application tries to portray. Many people have little to no knowledge about the market and will actually give their money to financial advisors and banks to invest for them. This holds several problems. The first and most major problem is emotion. Everybody has emotions and can often let their emotions affect their decision making. For example: if someone dislikes the goals or products that a company offers, they might not want to support that

company and will in turn invest the money elsewhere. What is worse is when it is your financial advisor making these emotion based decisions. That advisor would sometimes make the decision regardless of whether or not the numbers and facts about the company look good. As a trader myself, nothing is more frustrating than missing a good trade and potentially missing out on a good return. It is an obvious fact that the ability to make good decisions deteriorates in a frustrated or angry state of mind. With this application, we make a point to use only facts when creating a report on the company's press releases and the price movement leaving all emotions out. Educating the user on the facts and on the information that is actually provided will certainly allow for better decision making and better investment choices.

This application will change how the world looks and invests in the stock market. The stock market is the largest and most popular platform for economic transactions. According to analysts, the market is worth about \$55 trillion. It is a fairly obvious that there is a large user base world-wide considering the massive amount of money the market is worth. This market is made up of beginning traders to companies, and to more advanced day traders. This application will provide insight to these people so they can understand better what is going on. However, it is not only the investors and traders that will have more of an idea about what is going on inside a company, but the companies themselves will gain valuable information on how their content can affect people's decisions. This type of application has never been seen before. Because the information and predictions are accurate, some consequences will follow. It is the content of press releases and the overall sentiment of social media that can greatly influence the minds of the investors. If companies are aware of this and can see how their content affects decision making, they may start to purposely change the presentation of their announcements. They can change the presentation of their data in their favor, which may cause some ethical controversy. After evaluating this potential problem and how it may affect the business, it was concluded that it will not have any impact on how the application is perceived. Whether or not the company changes how it presents its data is up to the discretion of the company and any legal action would be taken against the company and

not our business. Investors and traders will still use the product because the accuracy of the application will not change. The only unethical use would be the one stated previously by the company. There are rules in place by the U.S. Securities and Exchange Commission to prevent certain actions like this. However, the action will be taken against the company and not this application. This the only potential issue that this application can be indirectly associated with. However, it is important to look at all of the important positive effects it will have on society which includes many. The first one being the fact that investors and traders will be able to make more money. There is nothing scarier than seeing a drop in the market and the balance in your account drop by a large percentage. This is especially true if it is your retirement fund or life savings that is quickly depreciating in value. Allowing yourself to have more than just a random guess on companies to invest in is certainly important. Analyzing press releases and social media will allow for a more educated guess so you can see those accounts grow substantially. When seeing these accounts grow more, the feeling of security grows. Security in life is what most people strive for. This means having a backup plan when something goes wrong or money to take care of yourself and your family when something unexpected occurs.

It is pretty clear at this point the potentials this application holds that extends far beyond just making money. There is no question that there is huge monetary potential, but as explained previously there are also economic potential and social potential to help the world grow and become more educated about the market. When this application was started, the goal was to provide an analysis of the company's press releases and social media action and give the user a highly accurate representation of what is actually going on. As stated previously, there are definitely other programs that may hope to provide the same service as we do however the approach they use is far different. One example is TDAmeritrades thinkorswim platform. Thinkorswim is an innovative trading platform that prides itself on constant innovation to help "keep you on top of the market". One thing this program has that we do not is the ability to place trades directly. This may make trading more efficient because you use one application, but

it does not add much in the analyzing realm. Eventually, that is a goal of our application, to add the ability to trade directly on the dashboard. However, we do not see it as a limitation at all and on the other hand, we have something that they do not. That is the ability to analyze social media and press releases. They do not have this function but do use other mathematical approaches which we have found ineffective. The approach that this application uses and the methods used are unique and never seen before in the industry. The idea is simple and is usually done by investors and traders without even thinking about. Why do it manually if you can have a program do it for you? It can take hours if not days to go through and properly analyze all of the data given. In that time a stock's price can change dramatically. Furthermore, the training data that is used for this program has been carefully selected and is how the application will complete the analysis. Because the training data is accurate and methods are proven to work through testing, we feel confident giving the user predictions on what may or may not happen to the stock price. The market has been around for many years and we think it is time to master it.