**ILS Z-639: Social Media Mining**

**Final Project Proposal**

**Twitter Sentiment Analysis to Predict Stock Prices**

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**Introduction:**

Stock price prediction systems have been for the longest time the most difficult to model. This is because stock prices depend on many different factors like industry changes, economy in the country of operation, capital markets, and finally investor sentiments. The financial system includes various financial intermediaries that determine the flow of funds in the market and economy. Not to mention that government policies (taxation and interest rates) also play a big role in determining the operations of companies. This project considers the stock market in India and the various factors that play a role in determining the market direction. Stock trading in India takes place mostly on the National Stock Exchange (NSE) and the Bombay Stock Exchange (BSE). The Securities and Exchange Board of India (SEBI) manages the market regulations and oversees laying down best practices for efficient market performance.

**Data Collection and Analysis:**

The data required for this analysis has been obtained from two sources: 1) Twitter for the sentiment analysis aspect of the project and 2) historical stock data and fundamental data about companies are obtained from MoneyControl. The model will make use of fundamental data from the income statement and balance sheet, along with historical price changes to predict the current stock prices. The most important aspect of this model is the investor sentiments obtained from the twitter data collected, since various news about companies, or government policies can shift the moods in investing (retail investors). Predicting the value of stock has always been a difficult task, however, in this project we attempt to capture this flow in investor sentiments to design a prediction model.