Crypto Market Cap Twitter Sentiment Analysis

For our project our group is intending to work on pulling live updating data from crypto market cap (platform to give live measurement of market value for each publicly traded/listed crypto currency) to compare sentiment on Twitter. This will fall under a branch of Sentiment Analysis, but is focused on live sentiment analysis based on current changes occurring within the crypto currency markets. Our team is composed of: Raza Ali (syedra2), Guru Beedu (gbeedu2), Nusrat Jaffer (njaffer2), Gabriel Lluch (glluch2), and Rachel lee (rmlee4), with Raza being our team lead.

As mentioned above, our free topic is creating a Data metric driven visualization for Twitter Sentiment Analysis specifically based on data pulled from and related to live updates from Cryptocurrency market cap changes. We chose this topic because we have noticed the rising interest of Crypto Currency and blockchain functionality, with the level of volatility and changing atmosphere of most crypto currency based projects sentiment is always changing (which is most easily tracked by changes in the crypto market cap value of each project). We think it would be important to easily filter for a specific currency you're looking into via hashtags to find the most relevant information based on changes noticed in the market.

We're intending to strictly work in Python: using tools such as Twitter Developers to pull live data from the Twitter API, use some sort of python library such as yahoo finance or cryptoCMD to pull live data, we'll also make use of Pandas, numpy, and matplotlib to create relevant Data Visualizations to compare directly with sentiment received from Twitter, and if time permits we may also try to add plots to show sentiment comparing the top 5 currencies of each run (every time the tool is used to call general twitter sentiment). For the expected outcome we want to be able to view live data pulled from crypto market cap (possibly be able to search

for a specific Crypto currency of choice), and be given a visualization (maybe in the form of a plot?) of current changes over the course of 24 hours, based on this information use a hashtag to find sentiment of that crypto currency, and be returned with a few different relevant graphs and charts to compare good, neutral, and bad sentiment.

In regards to the breakdown on workload we intend to spend time in the following manner: 1. Architecture/design/learning (15 Hours) 2. Crypto API learning and integration (10 Hours) 3. Twitter API learning and integration (10 hours) 4. Sentiment analysis (15 hours) 5. Data Visualization(40 hours) 6. Final software integration and presentation (20 hours). Currently each person is to spend time working on architecture, design, and learning (learning on our own time to get more familiar with certain python libraries), and we plan to split implementing twitter API and sentiment analysis between 3 of us while the other 2 will work on integrating the data visualization and metrics based on the information from the crypto market cap API integration (have not decided how we will split currently). Each person should reach the rough estimate of 20 hours of work done each week based on this breakdown, and it is imperative that our group leader ensures we meet this goal.