1. **What are the names and NetIDs of all your team members? Who is the captain? The captain will have more administrative duties than team members.**

Tony Tumba - netid: ttumba2

Davy Ji - netid: davyji2 - Captain

Pranith Bottu - netid: pbottu2

Ron Basak - netid: basak4

1. **What is your free topic? Please give a detailed description. What is the task? Why is it important or interesting? What is your planned approach? What tools, systems or datasets are involved? What is the expected outcome? How are you going to evaluate your work?**

Our free topic will be sentimental analysis in social media. We plan to analyze user sentiment about any particular topic based on examining their text from their social media posts. This project seems interesting since it would provide us an insight of what people are thinking about for any given topic ranging from the news to entertainment.

Our planned approach would be to decide which social media platform(s) we would like to use. Although we have not chosen one in particular, we intend to use either Twitter, Facebook, or YouTube comments. After choosing which platform, we would then learn how to use the API and any given constraints of certain actions provided by the API. We will then use Python and its libraries to gather datasets. There is a large amount of research we will do to narrow down the exact tools and datasets our project would benefit the most from. Then we will use python to analyze the dataset and group them by topic. Our expected outcome is given a tweet, or facebook post, our program will be able to output a few words of emotion that the poster/tweeter feels.

To evaluate our work, we will also look at the output generated by our model and compare it to what we thought the output should have been.

1. **Which programming language do you plan to use?**

Python3

1. **Please justify that the workload of your topic is at least 20\*N hours, N being the total number of students in your team. You may list the main tasks to be completed, and the estimated time cost for each task.**

We have 4 group members, which means 20\*4 = 80 hours of work.

Our main tasks involve the following:

* Researching how to implement sentiment analysis and examples of it in today’s world - 10 hours
* Researching APIs and other polling software to scrape public social media text - 10 hours
* Researching various types of social media API, mainly twitter, facebook, instagram - 10 hours
* Researching the problems with social media scraping and any violations that may need to taken into account when doing sentimental analysis - 10 hours
* Designing structure of various functions to receive text data - 10 hours
* Designing an algorithm that can do the social media sentiment analysis we want - 20 hours
* Debugging any issues as they come up (modifying parameters and optimizing) - 10 hours

If time permits:

* Analyzing the results to think of key takeaways and modify algorithm if need be to get better results - 5 hours
* Miscellaneous: Make any improvements or keep developing other features - 5 hours