

Computer Graphics Project 2019

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27/12/2019

A screenshot of text

Description automatically generated

# Introduction

The aim of this project was to mine data from Twitter using python and tweepy to perform sentiment analysis based around a specific topic which, in this case, was Donald Trump. The results of this analysis was then to be represented in graphical form, so that they could be easily read and interpreted.

# System Overview

We knew that the data we would be using for visualization purposes would be in numerical format, so we decided to use bar charts to display the data. Sentiment analysers were used to group the data so it could be represented on the chart. It was decided that a front end/back end split should be used for a couple of reasons. The first was to increase security, as there were a number of keys needed to access the data on Twitter that we wanted to keep private. These were stored in a separate file so they could not be accessed from the client. They split was also done to help increase the client performance, as backend handles more heavy calculations and sorting of data.

# Topic Selection and Preconceived notions

When it came to choosing a topic, we wanted to choose something that would be a well-used topic online so that we could ensure there would be enough data to be taken and analysed. We decided that it would be a good idea to use a relatively controversial topic. As the purpose of the project was to conduct sentiment analysis, a topic with widely varied opinions would be more suitable. For example, a well-liked topic may provide a lot of data, but if there are little to no negative tweets would not be suitable for visualization and comparison purposes. Instead, choosing something like Donald Trump, who has many supporters but also a large number of people who are very against him, would be much more suitable. This, with the steady flow of tweets about him, is primarily why we chose this topic for the project.

# Post-process Analysis

For the work that was completed, we were able to achieve what we had expected. As time went on, we knew we wouldn’t be able to fully complete all of the sections of the brief, due to one person being unable to do any technical work. We decided to stop once we had completed the second section of the brief, so that one person wasn’t overloaded with work that should have been shared.

# Conclusion

With this project, more work could done to make it more comprehensive. Data from twitter about age, location, etc could have been gathered to conduct deeper analysis on Tweets about Trump, like the average sentiment towards him from certain age ranges, or within different geographical regions. Unfortunately, due to a number of different issues both technical and non-technical, only one person was actually capable of doing the work, so all of the technical work was done by him. Given what was achieved with only one person, two people working on the project would probably have allowed us to fully complete the project to the level we had expected at the beginning.

If more work was to be done on this project in the future, any technical work would be carried out by those who did not contribute technically to the earlier work. This work would cover the third section of the project’s brief, gathering data for more detailed drill-downs.