**Twitter’s Big Data**

Did you know that that Twitter gets over 500 million tweets posted per day? With over 328 million active users, Twitter is a data gold mine. Twitter data is the information collected by either the user, the access point, what’s in the post, or how users view or use your post. While this might sound somewhat vague, it’s largely due to the massive amount of data that can be collected from a single Tweet. While Twitter analytic programs are becoming widely-used, for new analysts, a useful tool would be a program that can procure specific tweets for them. It can be easy to get lost in the large volume of information Twitter has, but with our program, it is easy to find what you are looking for.

**Using Python to Collect Tweets**

When a user accesses our program, they will be asked a series of inputs in order to narrow down their search. The first is how they would like to search: Would the user like to search by hashtag or Twitter handle? The next input is asks what specific hashtag or Twitter handle they would like to search. The final prompt is how many tweets they would like to return. If you wanted to know Donald Trump’s last 5 or last 500 tweets, this program will bring them right to you.

**TkInter**

Our Program can collect tweets for analysis in an easy, user-friendly way. By running the program in a GUI (Graphical User Interface) by using TkInter, our process is simple and does NOT use the terminal or Jupyter Notebook. TkInter has become python’s standard GUI as it is a lightweight and can be used on UNIX or Windows-based systems. TkInter is an object-oriented layer and was the most challenging part of this project.

**Tweepy**

In order to answer the user’s query for information, our program will be using Tweepy. Tweepy is a well-documented, open-sourced library that is hosted on [GitHub](https://github.com/tweepy/tweepy) and enables Python to communicate with Twitter platform and use its API. Tweepy supports accessing Twitter via OAuth. Tweepy provides access to the well documented Twitter API. With tweepy, it's possible to get any object and use any method that the official Twitter API offers. Tweepy heavily relies on the Twitter API, which has excellent documentation, which makes it probably the best Twitter library for Python.

**Conclusion**

Overall, our program is an easy to use tool that can help gather any string of tweets from either a user or from a hashtag. This can be a helpful program for anyone who wants to gather a large amount of tweets or someone who is just getting started in Twitter data analytics. Python can be a great language for accessing data about Twitter, and our program, with the use of TkInter and Tweepy shows its basic functionalities.

**Who Did What?**

As a team, we did a fair job of evenly splitting up the work and playing to each other’s strengths. After collaborative research for what our project should be, we decided on something involving Twitter after we stumbled upon Tweepy. Majority of the Twitter/Tweepy code was done by Patrick Kelly with help from Jonathan. Majority of the TkInter/UI code was written by Jonathan Schulz with help from Patrick Kelly. The poster for this project was again a collaborative effort as the design was handled by Jonathan Schulz and the write up was completed by Patrick Kelly. We are both very proud of this project and feel it was a great learning opportunity.

**How the Code Works**

The TkInter (GUI) for our program runs on top of the program in order to put it into a nice window for our users. Our program will be collecting input from users on what they want to search and how many tweets get returned. Every time a user hits the save button after typing in input, the program saves the input as a variable. When the user hits ‘Close Window and Get Results’, our program will open a new window and use tweepy to search through twitter and post the results in that new window. Tweepy interacts with the Twitter API in order to get the results of a user’s request. While this may sound simple, working with classes, TkInter, and the Twitter API was a challenge. We learned that our program, which uses Tweepy and TkInter, works best with classes instead of multiple functions.