

## CS 122 Proposal: Twitter History of a Hashtag

Sushmita Gopalan, Haylee Ham, Chelsea Ernhofer

The goal of our group is to visually show the history of a specific hashtag supplied by the user. We plan to track the hashtag using twitter API and gather information on the date, location, and whether the user is 'verified' (famous). We then plan to use a graph to visualize the growth and propagation of specific hashtags.

This is an ambitious project. Here are the steps we are planning to take in order to complete it:

- (1) Get access to Twitter's API, which tweet data going back as far as 2008.
- (2) Retrieve hashtag tag data using specific 'hashtag' library available through the API.
- (3) Write program to parse through necessary tweets, extracting information on where and when the hashtag was used and who tweeted it.
- (4) In program, add all applicable tweets to a data structure, analyze any clusters of location or timing to help explain growth.
- (5) Write program, using visualization techniques, to map the data for that specific hashtag.
- (6) Create a time-lapse presentation of how specific hashtag has grown.

In addition to the time-lapse presentation, we hope to be able to display any relevant/interesting information about the hashtag in question, such as when and where the hashtag started, whether it was used in with positive or negative sentiment, and what verified users were impactful in the hashtags growth. We will also include the tweet that received the most likes and was retweeted the most. Our team also is interested in creating heat maps and graphs to analyze how the popularity of the tweet has risen or fallen over time.

Timeline:

Week #	Steps to be completed in that week
4	Steps 1-2
5	Steps 3-4
6	Steps 4-5
7	Steps 5-6

8	Steps 5-6
9	Steps 5-6, create final presentation
10	Finalize project, practice group presentation