Final Project Proposal

Objective and Motivation

We want to create an online dashboard/web application that will allow the user to view and interact with a visualization similar to Hans Rosling's Gap Minder Visualization (bubble graph: https://www.gapminder.org/tools/#$chart-type=bubbles).

The motivation behind this project is to create a tool that will enable companies who use social media to advertise their products or services through influencers to measure who truly has a good engagement rate to maximize their public reach. Many companies use the number of followers to decide the appropriate influencer, but many accounts across the world are known to buy followers (which Instagram is trying to detect), hence, these ads are reaching out to bot accounts rather instead of real viewers.

The bubbles in the viz will represent Instagram Influencers' Accounts. The visualization will show the engagement rate (y-axis) versus the number of post each account reports daily (x-axis). Engagement rate will be total number of watches, likes, and comments. The size of the bubble will reflect an account's (influencer) total number of followers. Additionally, two interactive tools will enable the users to view more data. The tap tool will invoke a line graph that shows the data displayed in the first viz but only for that tapped bubble (second will show a line graph, engagement vs. time, for a particular social media influencer). The second tool, a slider widget, will allow users to view data per day, with the date displayed at the background of the first viz.

Rough Plan of Work with Approximate Milestones

The visualization and dashboard will enable its users to find influencers that have a good engagement rate with their respective number of followers visually. For instance, if a user has 500k followers, but averages 10k views only per post, it will alert possible advertisers that such metrics do not promise a good ROI on an advertisement. On the other hand, an account with 150k followers, but an average of 50k views will be more promising. Think of this tool as a way to measure the greatest ROI per ad placed on a possible influencer. The greater the reach, the greater the return on investment for that ad. To maximize reach, pick an influencer with the highest desired engagement (users will be able to choose the type of data displayed on the y-axis, watches vs. comments vs. likes vs. total).

We will use Bokeh with Flask to create the visualization as part of a web application. The milestones of this project will include:

1. Create a bubble graph
2. Add a slider widget to view the daily changes
3. Add a tap tool that will allow users to invoke a second visualization (underneath the bubble graph). The second viz will show a line graph for the tapped bubble.
4. Use Flask to turn the project into a web application or a dashboard.

Note: There are scripts that collect data daily and outputs a simple aggregated/analysis on the collected data from the Instagram.

Deliverables

A project folder which will contain all the necessary scripts with the dataset (for the purpose of this project, the dataset will be included with the deliverables rather than save it in a remote database).

Team Members

Alex Costinescu

Ahmed Al Hasani