**Eyes and Ears Everywhere (E3)**

**Project Objective:**

The main objective of this project is for the user to search for terms on Twitter and hashtags on Instagram and plot them on Google Maps based on where the tweets and photos from Instagram are located.  Tweets can be ordered by recency or popularity whereas Instagram photos are only ordered by recency.  This project is essentially a search engine for Twitter and Instagram.  It allows the user to not only read what is trending but also see where they are trending.

**Proposed User Interaction (5 interactions):**

1. Searching for terms and hashtags on Twitter and Instagram
2. Clicking on the username of the person who has tweeted or posted a photo on Instagram to see their recent tweets or photos in a modal.
3. Clicking on the Google “mini” map markers next to each result in either Twitter or Instagram zooms and pans to the area on Google map.
4. Clicking on a Google map marker to show the tweet or Instagram thumbnail photo in the info window.
5. Clicking on the Instagram thumbnail in the results shows the full sized version of the photo in a modal.

**API’s:**

* Instagram
  + User and hashtag searches yielding most recent results.
* Twitter
  + User and hashtag searches allowing for more recent and popular results.
* Google Maps (Javascript V3 API)
  + Geocoder to convert latitude and longitude to a formal address
  + Used the actual map to place markers for Twitter and Instagram
  + Adding and manipulating the info window for Twitter and Instagram results

**Implementation Details:**

**Search**

The user must first choose whether they want their tweets to be ordered by popularity or recency.  The user then types in a keyword to search.  Clicking on the search button sends the search term to two Ajax calls - one to Instagram and one to Twitter.  The JSON objects that are returned back are parsed through to determine if they have a latitude and longitude field.  If they do, they are appended to their designated areas and a new Ajax call is sent to Google’s geocoder in order to turn the coordinates given into a formatted address.  The formatted address is paired with their respective results in Twitter and Instagram.  While this is happening the same latitude and longitude is used to create the Google markers on the map.  Within each marker, the info window is created containing the respective results to that location.

**Clicking on the username**

Should the user want to see more tweets and or photos from a particular user in the results, they can click on their respective name.  This in turn will cause a new Ajax call to happen sending the respective username to get a new JSON object.  This object is used to obtain the ten most recent tweets or photos from the user.  These results are then displayed in a pop up modal window.

**Clicking on the “mini” marker**

Should the user click on the mini markers next to the result section, the map pans and zooms to the location that correlates to that marker.

**Clicking on the marker (on the map)**

Should the user click on the marker on the map, this calls up an info window displaying the results data from either Twitter (the tweet itself along with the username) or Instagram (the thumbnail of the photo along with the username).  Clicking on the username calls the function discussed earlier in the section called “Clicking on the username”.

**Clicking on the Instagram thumbnail**

Should the user click on the Instagram thumbnail photo in either the results or modal window calls the jQuery function that utilizes the .index method.  This allows the function to know which thumbnail has been clicked and it then compares this value to an array with the corresponding value to link to the standard resolution image.  Once the standard resolution image has been found it is displayed in a modal window.

**Group member roles and responsibilities:**

**Project Manager/Group Leader:**

Carson Severyn - responsible for group and task management and making sure that all group project deadlines are met.

**Visual Presentation Lead:**

Frank Ng - responsible for creation or visual materials to support proposals, summaries, presentations as well as look and feel of the application.

**Research Lead:**

Bryan Jason Garsia - responsible for leading and/or supporting research efforts regarding API information and other required resources for the project

**Programming Lead:**

Michael De Leon - responsible for organizing project code, workspace, and general architectural approach