Carlos Bonilla

13 April 2015

GUS 8068

Professor Burns

Lab 5

**Introduction**

Geotagging is the process of adding geographical metadata to various media such as photographs and video. Geotagged data usually consists of place names, latitude and longitude, and/or distance. Geotagging can help users find a wide variety of geographic information from a device. Many popular social networks support geotagging, including Instagram. Within Instagram, users can see updates from around the world in real time. This report uses an Instagram feed as an overlay within a Leaflet map. The feed uses coordinate points to reference geotagged pictures and video. A popular tourist destination, Times Square, is used as the reference for this map.

**Methods**

The web map is encoded within an html file hosted in Github, Within this file, the site’s stylization is introduced. The tab title, Leaflet CSS, JavaScript, and Google Fonts CSS files are all placed within the <head> section. Additionally, in lieu of solid color, a script referencing a background image is placed within this section. Within the <body>, the website title and caption are centered and written to be under Josefin Sans and Poiret One fonts. These fonts were taken from the Google Fonts directory. Lastly, a <div> element is created to hold the map boundaries (800 by 1000 px).

The next portion of the html file contains embedded reqwest and Leaflet.Instagram scripts. These call on and link to the reqwest and Leaflet.Instagram libraries that allow content to be displayed. Another script found below these links contains the rest of the map elements. Three variables, map view (with the coordinates 40.758899, -73.9873197 and zoom level 15), Instagram access token, and the URL API (with the same coordinates) are the first elements of this script. The map and URL variables set the location of this map because they center on Times Square.

The Leaflet map is initialized along with a tile layer that are loaded within the script. The L.tilelayer creates a base layer of map tiles. A URL template is specified to supply the tile images. In this case, CartoDB’s Dark Matter is used as the basemap. The maximum and minimum zoom are set to 16 and 14 respectively. The addTo ( ) line adds the tile layer to the map. The L.instagram(url).addTo(map); element adds the Instagram overlay to the map.

The last step involves adding a GeoJSON layer to the map. A Feature type is used to create an array enclosing GeoJSON objects (such as polygons). Additionally, the onEachFeature function is added in order to make Leaflet invoke something for each feature. In this case, the function is used to bind a popup to each polygon.

**Results**

The Instagram overlay appears to cover a radius that is a little over a half a mile. Thumbnail content is updated and displayed seamlessly. However, every time a photo or video is clicked, it shows up oversized. It is unclear why this happens. Based on its reputation alone, Times Square (40.758899, -73.9873197) is one of the busiest intersections in the world. The web map reinforces this notion. Every time the page is refreshed, new content appears. The majority of content is from tourists visiting the city.

**Discussion**

Times Square, otherwise known as the Crossroads of the World, is a major commercial intersection within New York City. It is one of the world’s busiest intersections. It is notorious for being brightly adorned with digital signage, billboards and advertisements. This area was chosen for analysis because of its famed (or infamed, depending on one asks) reputation. As expected, the majority of geotagged posts are generated by tourists. Many New Yorkers themselves avoid the area, generally because it is too “touristy”. If the coordinates set for this map referenced elsewhere (such as Bushwick), the content and content creators would likely be much different.

This web map is an example of how useful geotagging can be. Because geographic metadata is assigned to content, a user can view events and trends in a specific location. With the high availability of smartphones and social networks that support geotagging, users have a vast array of information available at any given time.

**Map Link**

<http://goo.gl/QB7KeM>

**Screencap**

