Socio-Geographic Map of Doha

Twitter Usage in Qatar v1.0

Project Overview

The objective of this project was to create a map that provides spatio-temporal information about the population of Qatar, by applying various filters to the tweets and categorizing them in various ways. Using the same framework for the map and data plotting using Google Fusion Tables, as was done in Project 1, the availability of three main filters on the website forms the crux of this project.

Firstly, users can filter the tweets based on the **language**. This is particularly helpful in identifying regions or districts where a specific language is dominant and these trends can be observed. Secondly, there is a filter for the **day of the week**. With this feature, it is easy to track and understand which days see the most activity by users in Qatar with regards to Twitter and can imply several things. Moreover, there is another fine filter that categorizes the tweets in a day into the various **times of the day**. With this filter, it is possible to track the peak times of each day in which the population in Qatar tweets the most. A combination of these three filters can provide meaningful insights into the behavior of the population in Qatar.

Tools

- Google Fusion Tables
  http://www.google.com/drive/apps.html#fusiontables

- Google Maps JavaScript API v3
  https://developers.google.com/maps/documentation/javascript

Process

For the purpose of data extraction, a tab-separated .txt file of the following format was used:

Centroid-lat [TAB] Centroid-long [TAB] language [TAB] dayofweek [TAB] timeofday [TAB] count [NEWLINE]

where,

language:
“en” (English)
“ar” (Arabic)
“tl” (Tagalog)
“other” (All other languages)

dayofweek:
“Sunday”
“Monday”
“Tuesday”
“Wednesday”
“Thursday”
”Friday”
“Saturday”

timeofday:
5h00-8h00 “early morning”
8h00 -12h00 “late morning”
12h00-15h00 “early afternoon”
15h00-18h00 “late afternoon”
18h00-20h00 “early evening”
20h00-23h00 “late evening”
23h00-5h00 “night”

The .txt file was imported into the Fusion Tables successfully using Tab as the Separator character and UTF-8 as the Character encoding. The table can be found at the following link: https://www.google.com/fusiontables/DataSource?docid=1U0IzLGIsOoOxluEFZNd7Z7bPB8UwvX-ENvtpa3Q

Each table has its own unique table ID as the identifier. Below is the table ID for the one we used in this project:
Table ID: 1U0IzLGIsOoOxluEFZNd7Z7bPB8UwvX-ENvtpa3Q

The multiple filters that were discussed in the introductory paragraph works on the Fusion Tables framework. Every time a filter is selected, it fetches data from the Fusion Tables using SQL queries, and modifies the visualization of the map accordingly.