**Bike Sharing Program Around the World**

Scope:

The idea of bike sharing program is to make bicycles available as an alternate and more environment friendly option to the regular public transports like train, bus, subway or taxi. There are various bike sharing options available all around the world; some are paid programs, and some are free. Some are located to specific docs and some are dock less. Our project goal is to identify:

1. Identify bike stations worldwide
2. Identify bike stations in New York City
3. Sort bike sharing company by country, city and company name
4. Display a certain location on the map based on the sorted data
5. Analyze bike sharing data of NYC from various perspective

For this:

1. We collected the data for world bike share sites and NYC bike share site
2. We used mongoDB as our database to load all the data
3. To clean, analyze and create our visualization on the world map and location specific map, we included Python Flask, HTML/CSS
4. We included A custom “creative” D3.js project for our nonstandard interactive chart
5. We created multiple charts that update from the same data
6. We used a new JS library to create visualization
7. Our project has large amount of data set with more than 5 million records, so we used a small portion to create the visualization
8. We user-driven interaction with drop-down menus

API Keys Required:

- Mapbox API (mapbox.com)

Technologies used:

- Python

- Javascript

- HTML

- CSS/BootStrap

Database : MongoDB

Libraries we used:

* D3
* Plotly
* Leaflet
* New Library: Chartist

We wrote a code to load the json file into mongoDB database and then read the data from there the we used flask web application, javasript and html to analyze the data and create web vitalization.

In our website, we can see the bike stations all over the world as well and the NY city. We can sort out a particular location on the map by using the filter option and it gives us results based on country, city and company. We also used D3 and and chartis libraries to create interactive graphical demonstration of the demography of the bike users in New Your City.

­­­­­­­Data sources

* <http>[://api.citybik.es/v2/networks](http://api.citybik.es/v2/networks)
* <https://en.wikipedia.org/wiki/Bicycle-sharing_system>
* <https://www.citibikenyc.com/system-data>
* <https://www.spaceotechnologies.com/top-bike-sharing-system-benefits-startups/>