

**Coursera Project: Capstone** 

By: Zhe Chen

Jan. 2020

- List of districts in Shanghai (Wikipedia)
- The coordinates of these districts (Geocoder package)
- Venue data related to the current stadium (foursquare API)

## 0 2 Methodology

- Web scraping Wikipedia page for districts list
- Get latitude and longitude coordinates using Geocoder
- Use Foursquare API to get venue data
- Group data by district and taking the mean of the frequency of occurrence of each venue category
- Filter venue category by "stadium"
- Perform clustering on the data by using k-means clustering
- Visualize the clusters in a map using Folium

## 0 3 Results



- Cluster 0: Districts with low number of stadiums
- Cluster 1: Districts with moderate number to no existence of stadiums
- Cluster 2: Districts with high concentration of stadiums

## 0 4 Discussion

- one stadium sitting in the Baoshan district and there're two in the Jiading district
- The rest districts have zero.
- According to calculation, cluster 0 has no stadium
- The stadiums in cluster 2 are likely meet the residents' demand in that district

## O 5 Recommendations

- The stadium developers to open new stadiums in the districts in cluster 0.
- The stadium developers are advised to avoid the districts in cluster 2.

