COURSERA CAPSTONE
IBM

Finding Best Neighbourhood in Boston

BUSINESS PROBLEM

- Many People Like my friend who have gone to Boston recently want to find a good Neighbourhood in Boston Which has got different types of venues.
- The objective of this capstone project Is to find the most suitable location for my friend in Boston. By using data science methods and tools along with machine learning algorithms such as clustering.
- This project aims to provide solutions to answer the question: Finding the Neighbourhoods which has got good restaurants, near to his University.

DATA

- **DATA REQUIRED**
- To solve this problem, we will need below data:
- ● List of neighbourhoods in Boston, USA
- ● Latitude and Longitude of these neighbourhoods
- ● Venue data of These Neighbourhoods.
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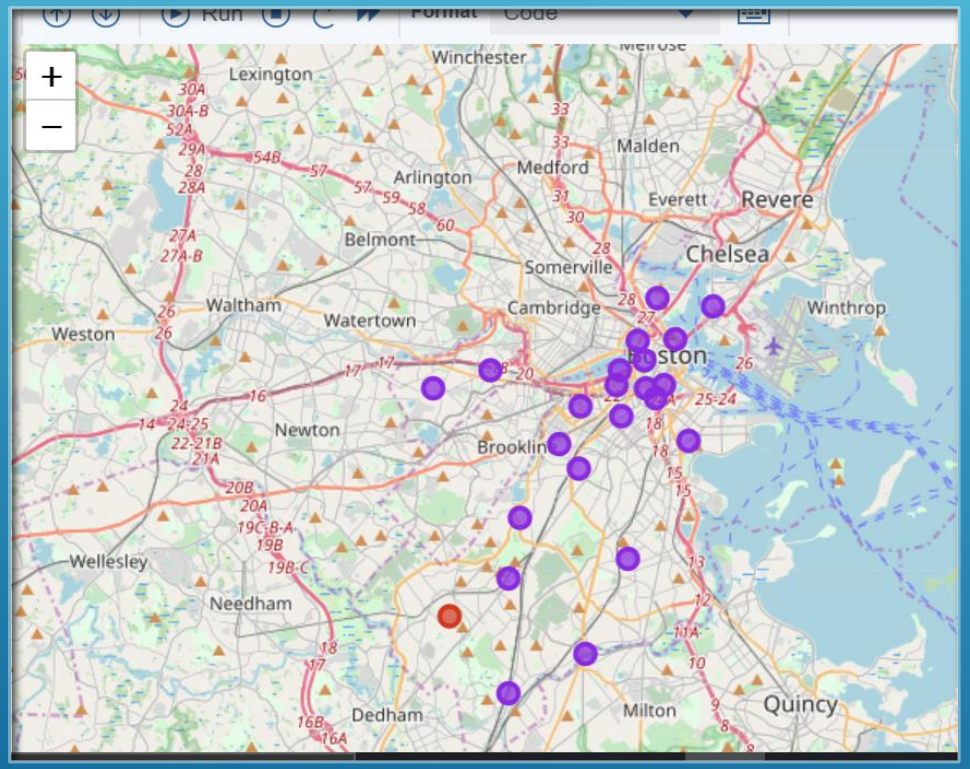
- **EXTRACTING THE DATA**
- ● Scrapping of Boston neighbourhoods via Wikipedia
- ● Getting Latitude and Longitude data of these neighbourhoods via Geocoder package
- ●Using Foursquare API to get venue data related to these neighbourhoods

METHODOLOGY

- Extracting Data from wiki
- Cleaning the data
- Finding Latitudes and longitudes of data
- Finding Venues nearby using foursquare
- Getting the Neighbourhoods most common places
- Using K Means Clustering on the data
- Dividing Neighbourhoods into clusters
- Analyse the clusters

RESULTS



Categorising Neighbourhoods:

Cluster 0 – All the Neighbourhoods in this cluster have mostly restaurants

Cluster 1 – in this Neighbourhoods there are mostly malls theatres and parks

DISCUSSIONS

- From the result I observed that all Neighbourhoods have mostly restaurants .
- Only 1 neighbourhood is different which is west Roxbury and which has mostly parks, malls, theatres .
- So All Neighbourhoods according to the most common venues are same any Neighbourhood will be fine if you are looking for good restaurants.

CONCLUSION

- As all neighbourhoods are similar according to most common venue so ,I suggest my friend to live in any neighbourhood other than west Roxbury which is nearer to his Uniiversity