IBM Applied Data Science Capstone

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Help you to determine your new business location in Riyadh, Saudi Arabia

- **Introduction**
  - Riyadh city is the capital of Saudi Arabia
- **Problem description**
  - Businessmen who would like to open a new business place
  - Similar business exist around
  - Avoid duplicate

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- **Data**
  - List of neighborhoods of Riyadh
  - Latitude and longitude coordinates
  - Venue data

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- **Methodology**
  - Provide list of Riyadh neighborhood from (https://en.wikipedia.org/wiki/Riyadh) using beautiful soup package in Python.
  - Provide list of geographical coordinates using Geocoder package in Python.
  - Use Foursquare API to parse all venue in Riyadh by providing their latitude and longitude.
  - Using Python Panda to generate a dataframe merging all the above.
  - Applying Machine learning method (K-mean clustering). We will cluster neighborhoods into 6 clusters.

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- **Result**
  - Cluster 0: high concentration of restaurants.
  - Cluster 1: low concentration of restaurants.
  - Cluster 2: High concentration of restaurants.
  - Cluster 3: low concentration of restaurants.
  - Cluster 4: low concentration of restaurants.

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- **Discussion**
  - Crowded neighborhood in our consideration
- **Conclusion**
  - Highest number in cluster 0 then cluster 2
  - Cluster 1,3,4 has very low number