IBM Applied Data Science Capstone

Where to Construct a New Shopping Mall
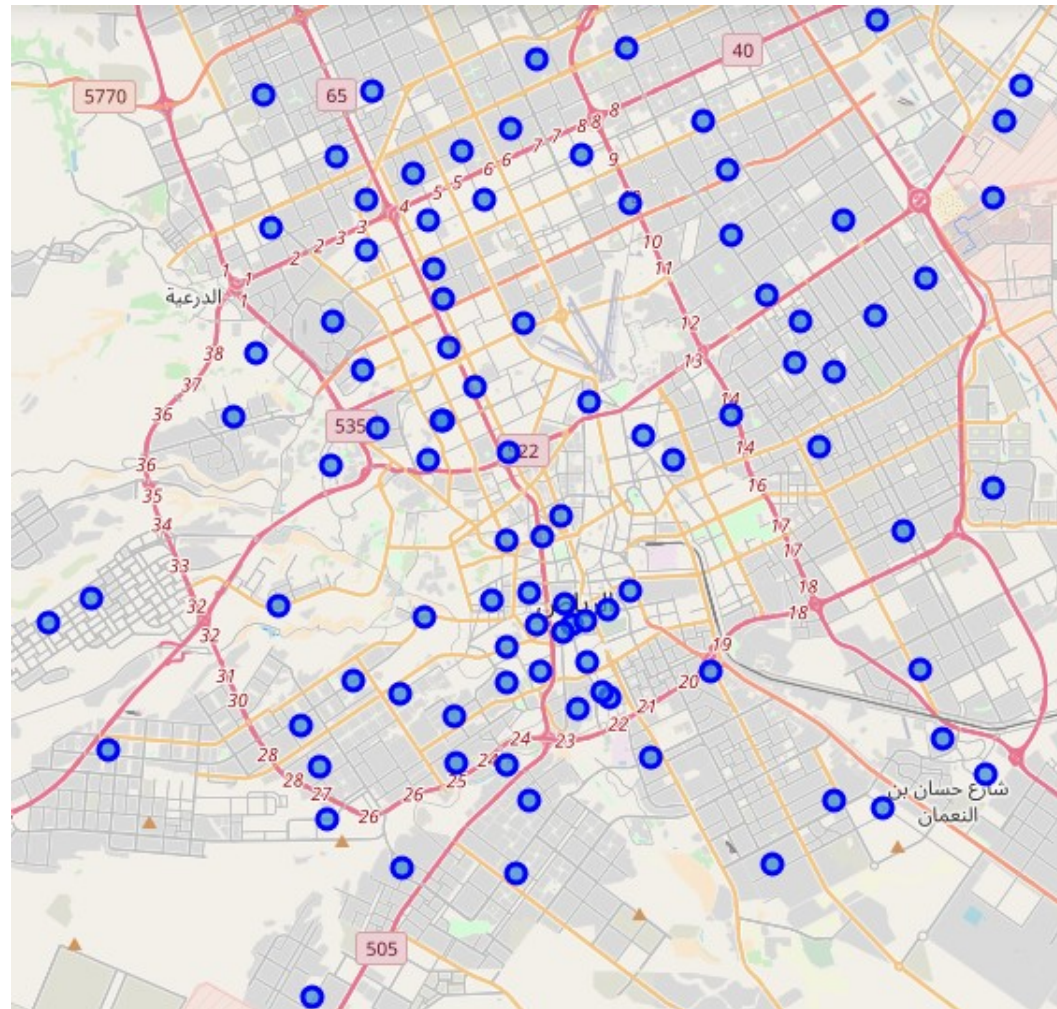
The Problem

Riyadh is the capital city of Saudi Arabia. With a population of more than 7 million people. It has more than 40 malls around the city and it is in need to build more of them.

In Which location a new shopping mall can be constructed?

Tackling The Problem

- Retrieve The neighborhood names.

- Retrieve Retrieve the geographical data of Riyadh.

- Use the Foursquare API to retrieve the venues in every neighborhood.

- Cluster neighborhoods based on the number of malls and the number of venues in each neighborhood.

- Determine which cluster is grouping the neighborhoods that are having high number of venues and low number of malls

Riyadh Neighborhoods

Clusters

After training our model using the number of shopping malls and venues features, clustering output result falls in 5 categories:

Cluster 0 - Low shoppinng malls, Low number of venues.
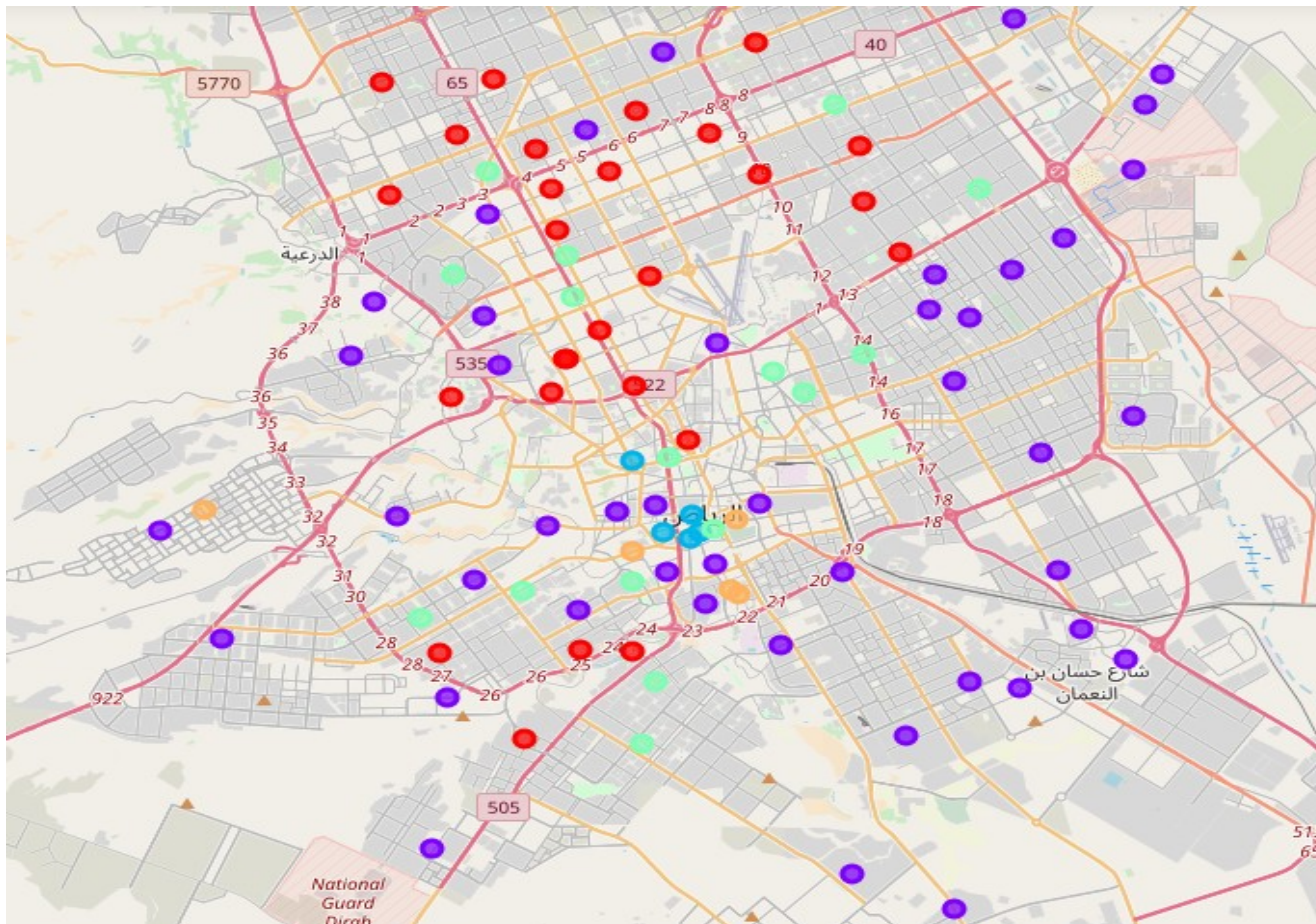Cluster 1 - Moderate number of shopping malls, Low number of venues.
Cluster 2 - Low shopping malls, High number of venues.
Cluster 3 - High number of shopping malls, High number of venues.
Cluster 4 - Below moderate number of shopping, Moderate number of venues.

Clusters Map

Red represents cluster 0, purple represents cluster 1, light blue represents cluster 2, light green represents cluster 3, light brown represents cluster 4.

The Candidates

New shopping malls can be built in a neighborhood that has high number of venues but low number of shopping malls. Theses neighborhood are at cluster 0.