



OPENING A NEW SHOPPING MALL IN NEW DELHI, INDIA

**Coursera Capstone
IBM Applied Data Science
Capstone**

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+ Location of the shopping mall is one of the most important decisions that will determine whether the mall will be a success or a failure.

+ **Objective** : To analyze and select the best locations in the city of New Delhi, India to open a new shopping mall.

+ This project is timely as the city is currently suffering from oversupply of shopping malls

+ **Business question** : In the city of New Delhi, India, if a property developer is looking to open a new shopping mall, where would you recommend that they open it?

BUSINESS PROBLEM

DATA REQUIRED

- +** List of neighborhoods in New Delhi
- +** Latitude and longitude coordinates of the neighborhoods
- +** Venue data, particularly data related to shopping malls

SOURCES OF DATA

- +** Wikipedia page for neighborhoods
(https://en.wikipedia.org/wiki/List_of_neighbourhoods_of_Delhi)
 - +** Geocoder package for latitude and longitude coordinates
 - +** Foursquare API for venue data
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DATA

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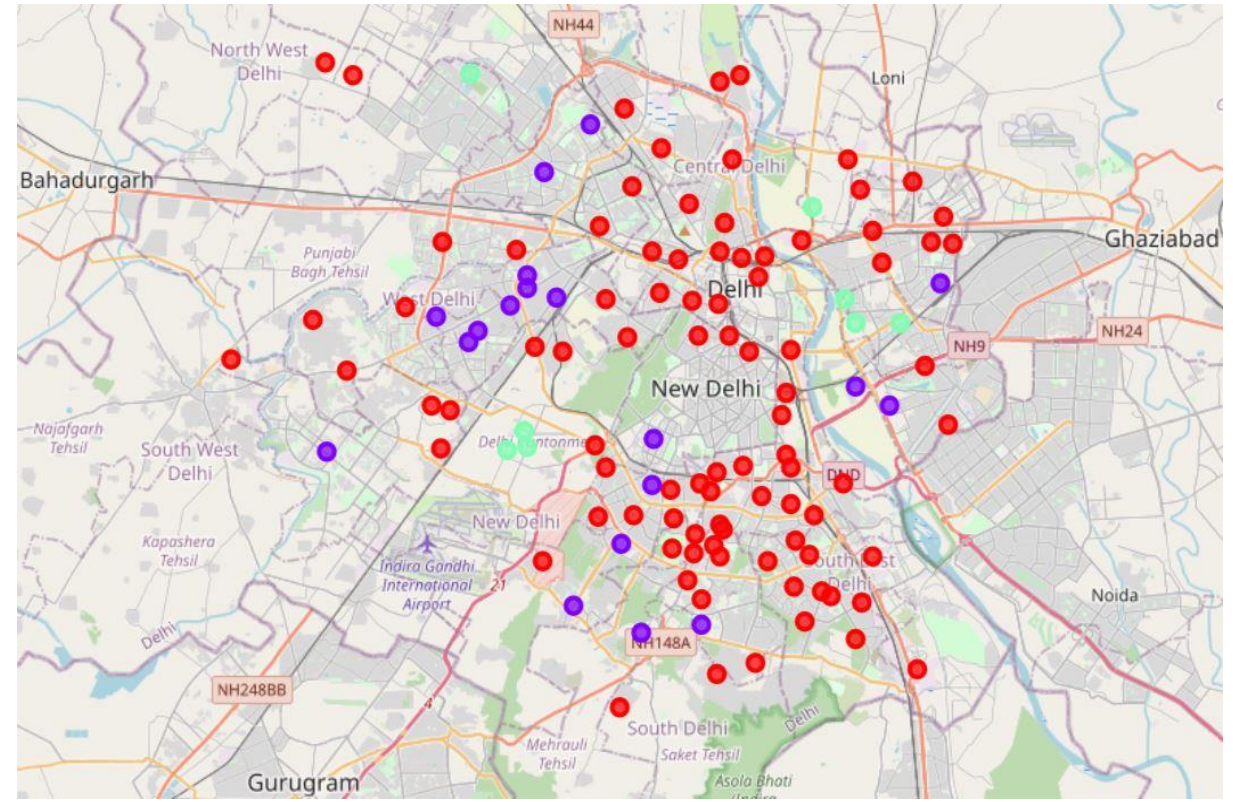
METHODOLOGY

Categorized the neighborhoods into 3 clusters :

+ Cluster 0: Neighborhoods with low number to no existence of shopping malls

+ Cluster 1: Neighborhoods with moderate number of shopping malls

+ Cluster 2: Neighborhoods with high concentration of shopping malls



RESULTS

- ✚ Highest numbers of shopping malls are in cluster 2, so opening there will face tough competition.
 - ✚ Best area to open or invest in areas listed under cluster 0 where we have either no existing mall or very few malls.
 - ✚ On the other hand, areas under cluster 1 have some existing shopping malls. Here investment can be better in compare in comparison of area under cluster 2.
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DISCUSSION

+ Answer to the problem: Advised to open or invest in areas listed under cluster 0 where no competition is there.

+ Findings of this project will help the relevant stakeholders to capitalize on the opportunities on high potential locations while avoiding suggested areas in their decisions to open a new shopping mall.

CONCLUSION

Thank you!

