Identifying under developed areas for future investment in Jaipur

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IBM DATA SCIENCE CAPSTONE PROJECT

BUSINESS PROBLEM

Objective – To find the under developed areas in upcoming metro city Jaipur for investment purpose.

Business Question - What are the neighborhoods that are currently under-developed and could be a potential investment opportunity in Jaipur City?

DATA

Data Required

• List of Neighborhoods in Jaipur.

• Latitude and Longitude Coordinates of those neighborhoods.

• Categories and Venues data using Foursquare API.

Data Sources

• Maps of India website (https://www.mapsofindia.com/pincode/india/rajasthan/jaipur)

• Geocoder package

• Foursquare Developer Access to Venue and Categories Data

Methodology

1. Web Scrapping the data and transform it into a pandas dataframe

2. Get the geographical coordinates of the neighborhood

3. Connecting with FourSquare API and creating new dataframe that contain categories and number of venues of each category for each neighborhood

4. Exploring and Clustering the neighborhoods using K-Means algorithm

5. Visualize the cluster using maps and Box Plots

RESULTS

The result from the K-mean clustering show that we can categorize the neighborhoods into 3 clusters based on the number of venues in Top 10 categories in each neighborhood:

➢Cluster 0: 8 'Most Developed' Neighborhoods

➢Cluster 1: 12 'Under Developed' Neighborhoods

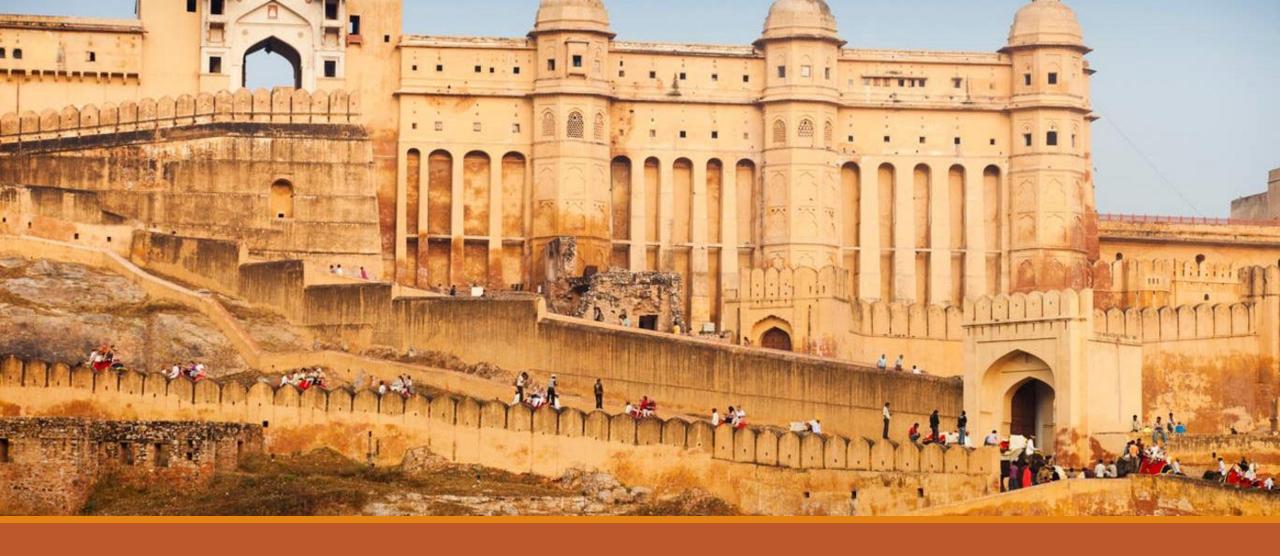➢Cluster 2: 6 'Moderately Developed' Neighborhoods

DISCUSSION & RECOMMENDATION

- After observing the results from clustering algorithm, it is clear that cluster 1 is the area which is least developed followed by cluster 2, and lastly cluster 0 which is considerably most developed.

- This project recommends property developers and investors to buy and develop property in Cluster 1 Neighborhoods.

CONCLUSION

- Answer to Business Question - The Neighborhoods in Cluster 1 are the least developed and thus the most preferred for investment.

- The findings of this study will help developers in locating profitable areas for investment in upcoming metro city Jaipur before the common public.

THANK YOU