

COURSERA CAPSTONE IBM APPLIED DATA SCIENCE CAPSTONE

Opening a new hindu restaurant in Madrid

Business Problem


- Location of the hindu restaurant is one of the most important decisions that will determine whether the mall will be a success or a failure
- Objective: To analyse and select the best locations in the city of Madrid, Spain to open a new hindu restaurant
- This project is timely as the population of Madrid is growing due to immigrants during the last decade

Business question ➤ In the city of Madrid, Spain if a entrepreneur is looking to open a new hindu restaurant, where would you recommend that they open it?

Data

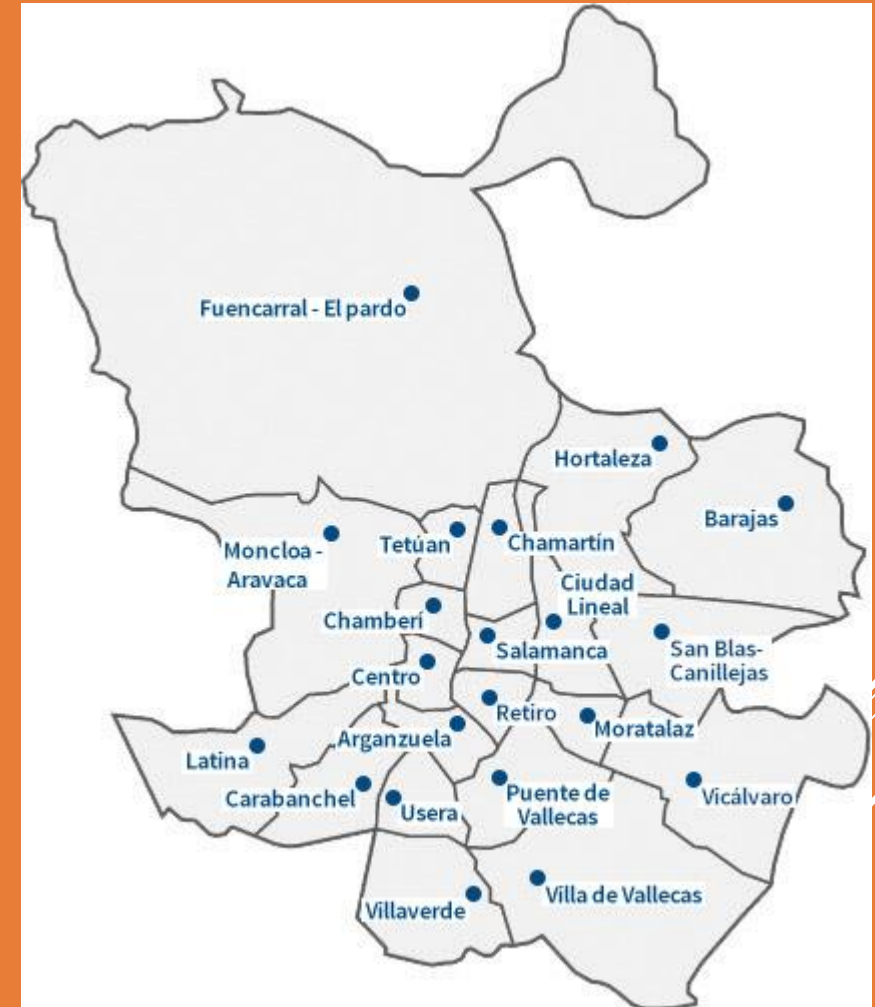
- Data required
 - List of neighbourhoods in Madrid
 - Latitude and longitude coordinates of the neighbourhoods
 - List of hindu restaurant already situated in Madrid
- Sources of data
 - Wikipedia page for the list of neighbourhoods in Madrid
 - Foursquare API for finding hindu restaurants in Madrid
 - Madrid institutional website for collecting the latitude and longitude coordinates of the neighbourhoods

Methodology

- Web scraping Wikipedia page for neighbourhoods list
 - Get latitude and longitude coordinates using Geocoder
 - Use Foursquare API to get venue data
 - Group data by neighbourhood and taking the mean of the frequency of occurrence of each venue category
 - Filter venue category by Hindu Restaurant
 - Perform clustering on the data by using k-means clustering
 - Visualize the clusters using Matplotlib library
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Results

- Categorized the neighbourhoods into 3 clusters:
 - Cluster 0: Neighborhoods with low number to no existence of hindu restaurants
 - Cluster 1: Neighbourhoods with moderate number of hindu restaurants
 - Cluster 2: Neighbourhoods with high concentration of hindu restaurants



Discussion

- Most of the hindu restaurants are concentrated in the neighbourhood that are situated in the center.
- Chamberi neighbourhood could be an alternative although it has a lot of international food restaurants, mainly Italian.
- Ciudad Lineal and Hortaleza have very low number to no shopping mall in the neighbourhoods.

Conclusion

- Answer to business question: The neighbourhoods of Ciudad Lineal and Hortaleza, situated in the north are the best places to start up the restaurant.
- Findings of this project will help the relevant stakeholders to capitalize on the opportunities on high potential locations while avoiding overcrowded areas in their decisions to open a new hindu restaurant.