Peer-graded Assignment: Capstone Project - The Battle of Neighborhoods (Week 2)

By

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Course Objective: To Build a Indian Restaurant in Saudi Arabia.
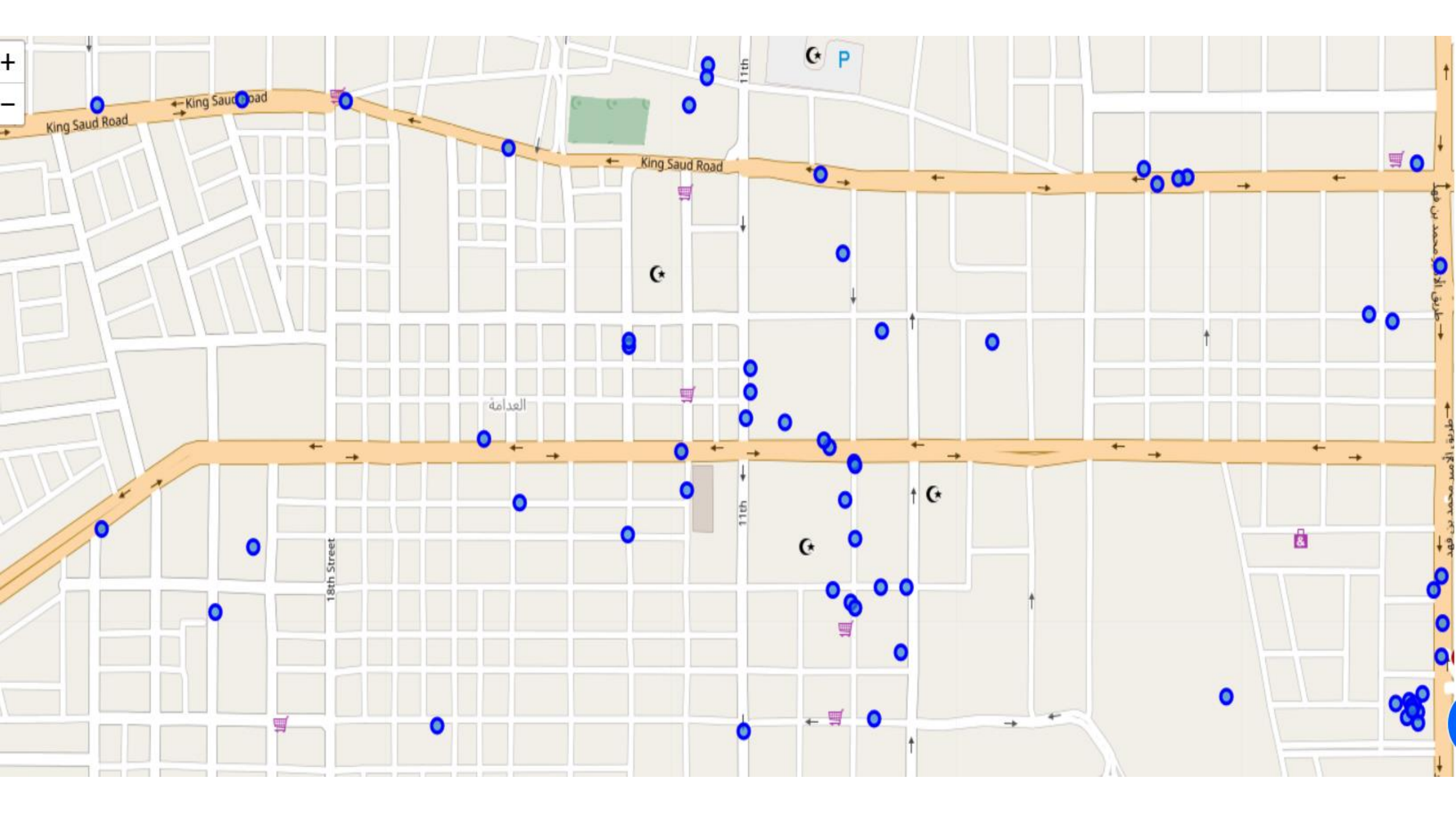
Problem Statement: The goal is to use Data Analysis from web sources to pick the best spot in Saudi Arabia to build a Indian restaurant. All the aspects must be taken into consideration to provide a list of best spots as a suggestion to the entrepreneur.
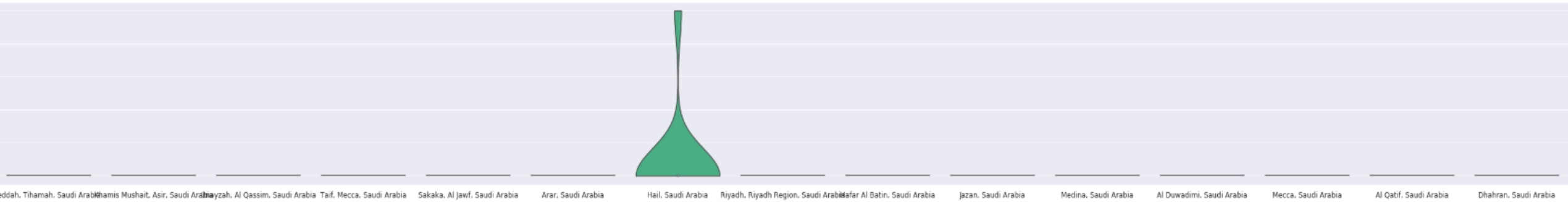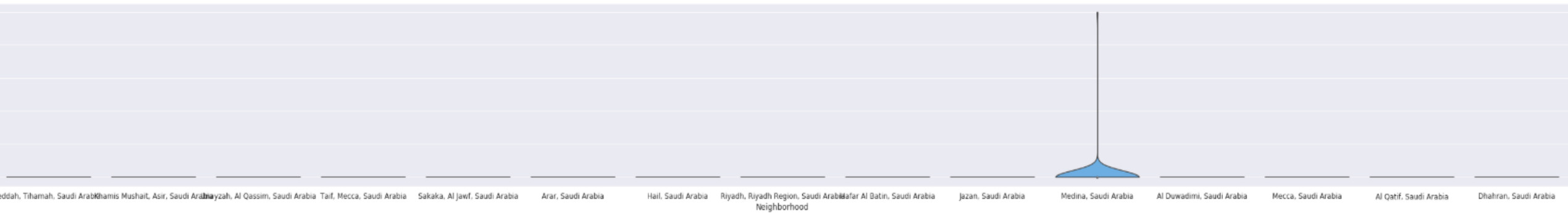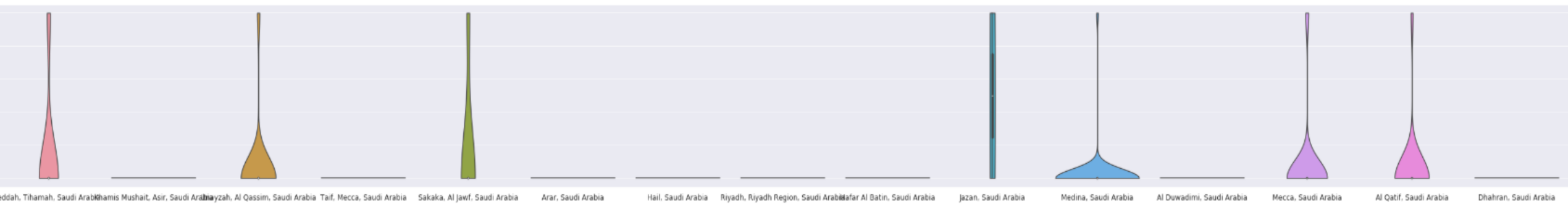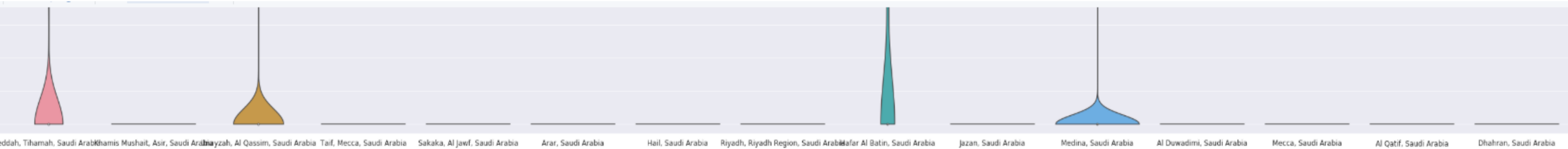
The place should not have many Restaurant around to avoid competition and must be a rich neighborhood for best profits.

Background : Our client wants to Build a Indian Restaurant in Saudi Arabia and requires our help in selecting best location so as to get maximum profits.

Objectives to be met: The following objectives are to be met by the project:

> Gather data on the spending patterns in various regions of Saudi Arabia
> Gather data on existing Indian restaurants in Saudi Arabia
> Get the average business by a Indian restaurant by dividing the wealth against number of Indian restaurants in the area.
> Create a comprehensive set of maps that can give clear and precise view of the opportunities to the client

Jeddah, Tihamah, Saudi Arabia | Khamis Mushait, Asir, Saudi Arabia | Unayzah, Al Qassim, Saudi Arabia | Taif, Mecca, Saudi Arabia | Sakaka, Al Jawf, Saudi Arabia | Arar, Saudi Arabia | Hail, Saudi Arabia | Riyadh, Riyadh Region, Saudi Arabia | Hafar Al Batin, Saudi Arabia | Jazan, Saudi Arabia | Medina, Saudi Arabia | Al Duwadimi, Saudi Arabia | Mecca, Saudi Arabia | Al Qatif, Saudi Arabia | Dhahran, Saudi Arabia

Neighborhood

	Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
15	Al Duwadimi, Saudi Arabia	Track	Women's Store	Falafel Restaurant	Department Store	Dessert Shop	Diner	Discount Store	Dog Run	Doner Restaurant	Donut Shop

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dammam_merged.loc[dammam_merged['Cluster_Labels'] == 1, dammam_merged.columns[[0] + list(range(4, dammam_merged.shape[1]))]]
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	Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
0	Jeddah, Tihamah, Saudi Arabia	Café	Gift Shop	Pool Hall	Restaurant	Insurance Office	Cosmetics Shop	Fast Food Restaurant	Donut Shop	Boutique	Flower Shop
3	Unayzah, Al Qassim, Saudi Arabia	Coffee Shop	Shopping Mall	Mobile Phone Shop	Café	Farm	Food Court	Flea Market	Fast Food Restaurant	Ice Cream Shop	Discount Store
6	Sakaka, Al Jawf, Saudi Arabia	Dessert Shop	Grocery Store	Bakery	Coffee Shop	Breakfast Spot	Café	Falafel Restaurant	Diner	Discount Store	Dog Run
7	Arar, Saudi Arabia	Flea Market	Falafel Restaurant	Gourmet Shop	Stationery Store	Women's Store	Department Store	Dessert Shop	Diner	Discount Store	Dog Run
9	Hail, Saudi Arabia	Arepa Restaurant	Shopping Mall	Floating Market	Gym / Fitness Center	Indian Restaurant	Doner Restaurant	Market	Department Store	Middle Eastern Restaurant	Cosmetics Shop
10	Riyadh, Riyadh Region, Saudi Arabia	Coffee Shop	Gym / Fitness Center	Public Bathroom	Cafeteria	Women's Store	Electronics Store	Dessert Shop	Diner	Discount Store	Dog Run
11	Hafar Al Batin, Saudi Arabia	Women's Store	Irish Pub	Middle Eastern Restaurant	Clothing Store	National Park	Fast Food Restaurant	Dessert Shop	Diner	Discount Store	Dog Run
17	Al Qatif, Saudi Arabia	Middle Eastern Restaurant	Buffet	Coffee Shop	Soccer Stadium	Mountain	Intersection	Pharmacy	Café	Restaurant	Department Store
18	Dhahran, Saudi Arabia	Soccer Field	Skate Park	Department Store	Dog Run	Dessert Shop	Diner	Discount Store	Doner Restaurant	Donut Shop	Eastern European Restaurant

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	Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
5	Taif, Mecca, Saudi Arabia	Cable Car	Women's Store	Cosmetics Shop	Dessert Shop	Diner	Discount Store	Dog Run	Doner Restaurant	Donut Shop	Eastern European Restaurant

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	Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
1	Khamis Mushait, Asir, Saudi Arabia	Burger Joint	Gym	Hotel	Donut Shop	Farm	Dessert Shop	Diner	Discount Store	Dog Run	Doner Restaurant
14	Medina, Saudi Arabia	Hotel	Shopping Mall	Ice Cream Shop	Coffee Shop	Donut Shop	Clothing Store	Mobile Phone Shop	Café	Fast Food Restaurant	Gift Shop
16	Mecca, Saudi Arabia	Hotel	Café	Restaurant	Ice Cream Shop	Coffee Shop	Lounge	Shopping Mall	Convenience Store	Malay Restaurant	Market

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dammam_merged.loc[dammam_merged['Cluster_Labels'] == 4, dammam_merged.columns[[0] + list(range(4, dammam_merged.shape[1]))]]
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	Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
13	Jazan, Saudi Arabia	Concert Hall	Café	Women's Store	Falafel Restaurant	Dessert Shop	Diner	Discount Store	Dog Run	Doner Restaurant	Donut Shop

Conclusion: After examining the above 5 clusters, we can recommend our stakeholders that Macca and Medina are the best neighborhoods in Saudi Arabia, to open their Indian restuarant. This is because in these areas, the most common venue visited by the public is the hotel and as these areas are highly populated with asians, opening an Indian restuarant would definitley be a good idea.