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

By MD. JAHIRUL HAQUE

## <u>Course Objective</u>: To Build a Indian Restaurant in Saudi Arabia.

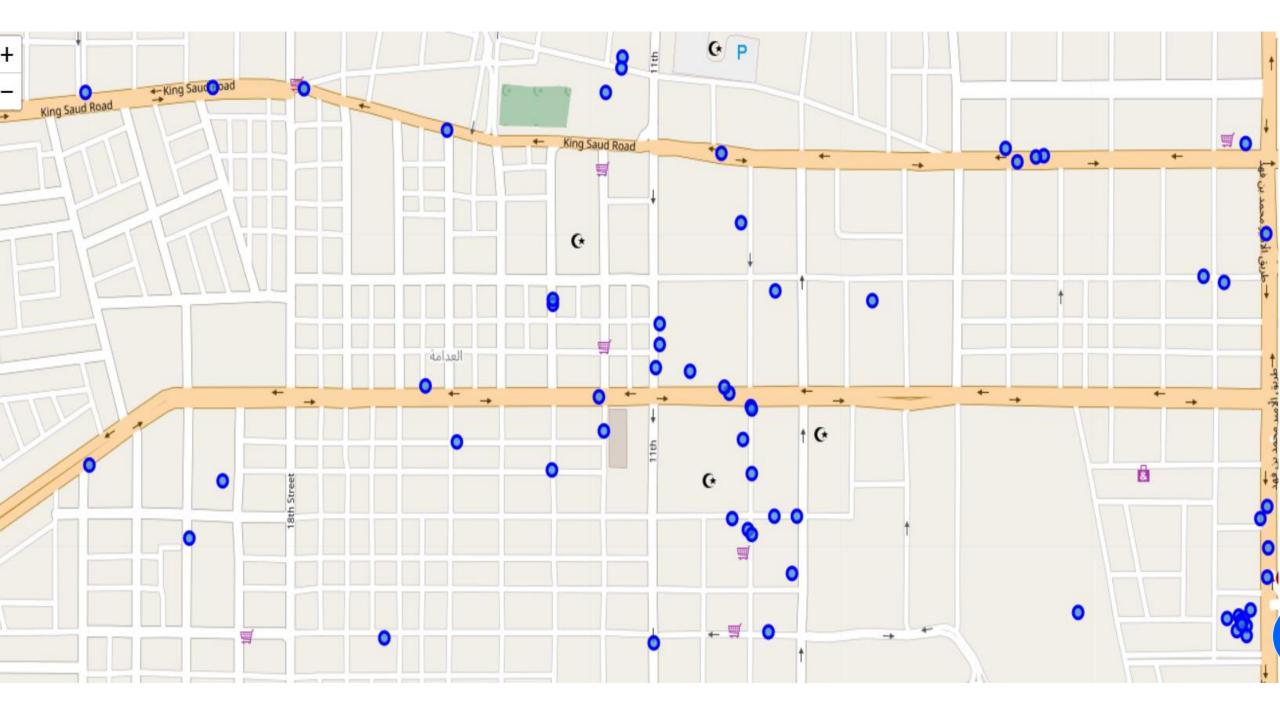
<u>Problem Statement</u>: The goal is to use Data Analysis from web sources to pick the best spot in Saudi Arabia to build a Indian restaurant. All the aspects must be taken into consideration to provide a list of best spots as a suggestion to the entrepreneur.

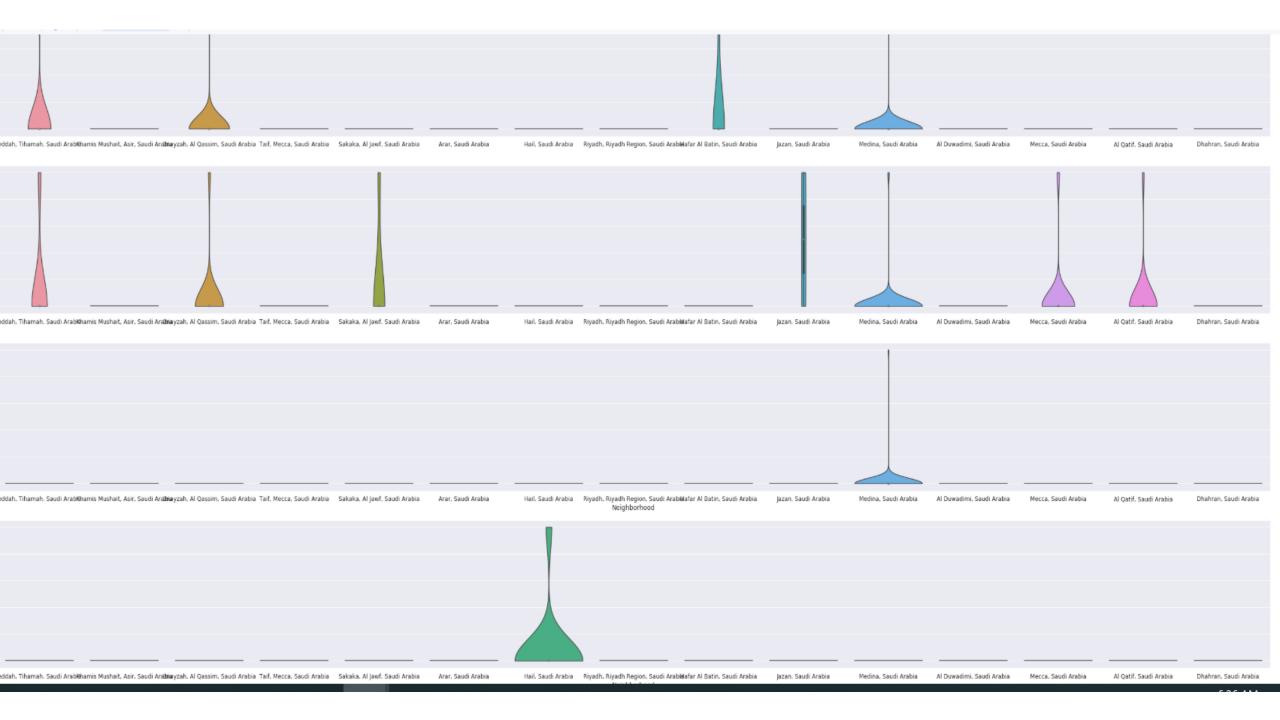
The place should not have many Restaurant around to avoid competition and must be a rich neighborhood for best profits.

<u>Background</u>: 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





	Duwadimi, Saudi Arabia	Track	Women's Store	Falafel Restaurant	Department Store	Dessert Shop	Diner	Discount Store	Dog Run	Doner Restaurant	Donut Shop
ne	rged.loc[dammam_merged[' <mark>Clu</mark>	uster_Labels'] == 1,	dammam_merged.colu	nns[[0] + list(range	(4, dammam_merged.shap	e[1]))]]					
	Neighborhood 1s	st 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 Venu
0	Jeddah, Tihamah, Saudi Arabia	Café	Gift Shop	Pool Hall	Restaurant	Insurance Office	Cosmetics Shop	Fast Food Restaurant	Donut Shop	Boutique	Flower Sho
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 Stor
6	Sakaka, Al Jawf, Saudi Arabia	Dessert Shop	Grocery Store	Bakery	Coffee Shop	Breakfast Spot	Café	Falafel Restaurant	Diner	Discount Store	Dog Ru
7	Arar, Saudi Arabia	Flea Market	Falafel Restaurant	Gourmet Shop	Stationery Store	Women's Store	Department Store	Dessert Shop	Diner	Discount Store	Dog Ru
9	Hail, Saudi Arabia	Arepa Restaurant	Shopping Mall	Floating Market	Gym / Fitness Center	Indian Restaurant	Doner Restaurant	Market	Department Store	Middle Eastern Restaurant	Cosmetics Sho
10 Ri	adh, Riyadh Region, Saudi Arabia	Coffee Shop	Gym / Fitness Center	Public Bathroom	Cafeteria	Women's Store	Electronics Store	Dessert Shop	Diner	Discount Store	Dog Ru
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 Ru
17	Al Qatif, Saudi Arabia Mi	liddle Eastern Restaurant	Buffet	Coffee Shop	Soccer Stadium	Mountain	Intersection	Pharmacy	Café	Restaurant	Department Stor
			Closts Deals	Department Store	Dog Run	Dessert Shop	Diner	Discount Store	Doner Restaurant	Donut Shop	Eastern European Restaurar
	Dhahran, Saudi Arabia  rged.loc[dammam_merged['Clu  Neighborhood 1st Most Comr			mns[[0] + list(range	(4, dammam_merged.shap	e[1]))]]	mmon Venue 7th Most Co	mmon Venue 8th Most Cor	mmon Venue 9th Most C		Common Venue
m_me	rged.loc[dammam_merged[' <mark>Clu</mark>	uster_Labels'] == 2, mon Venue 2nd Most Co	dammam_merged.colum	mns[[0] + list(range	(4, dammam_merged.shap	e[1]))]] mmon Venue 6th Most Cor	mmon Venue 7th Most Co		mmon Venue 9th Most C er Restaurant		
n_me	rged.loc[dammam_merged['Clu Neighborhood 1st MostComm	uster_Labels'] == 2, mon Venue 2nd Most Co Cable Car V	dammam_merged.colummon Venue 3rd Most C	mns[[0] + list(range ommon Venue 4th MostC Cosmetics Shop	(4, dammam_merged.shap Common Venue 5th Most Co Dessert Shop	mmon Venue 6th Most Cor				ommon Venue 10th Most	
am_me	nged.loc[dammam_merged['Clu Neighborhood 1st Most Comm Mecca, Saudi Arabia rged.loc[dammam_merged['Clu	uster_Labels'] == 2, mmon Venue 2nd Most Co Cable Car V  uster_Labels'] == 3,	dammam_merged.colummonVenue 3rd Most C Vomen's Store C dammam_merged.colum	mns[[0] + list(range ommon Venue 4th Most C Cosmetics Shop mns[[0] + list(range	(4, dammam_merged.shap Common Venue 5th Most Co Dessert Shop	mmon Venue 6th Most Cor  Diner C	Discount Store	Dog Run Don	er Restaurant	ommon Venue 10th Most  Donut Shop Eastern Euro	opean Restaurant
5 Taif,	nged.loc[dammam_merged['Clu Neighborhood 1st Most Comm Mecca, Saudi Arabia rged.loc[dammam_merged['Clu	uster_Labels'] == 2, mmon Venue 2nd Most Co Cable Car V  uster_Labels'] == 3,	dammam_merged.colummonVenue 3rd Most C Vomen's Store C dammam_merged.colum	mns[[0] + list(range ommon Venue 4th Most C Cosmetics Shop mns[[0] + list(range	(4, dammam_merged.shap	mmon Venue 6th Most Cor  Diner C	Discount Store	Dog Run Don	er Restaurant	ommon Venue 10th Most  Donut Shop Eastern Euro	opean Restaurant
am_me 5 Taif, am_me	rged.loc[dammam_merged['Clu Neighborhood 1st Most Comm Mecca, Saudi Arabia rged.loc[dammam_merged['Clu Neighborhood 1st!	uster_Labels'] == 2, umon Venue 2nd Most Co Cable Car V  uster_Labels'] == 3,  Most Common Venue 2n	dammam_merged.colummonVenue 3rd Most C Vomen's Store C dammam_merged.colum	mns[[0] + list(range ommon Venue 4th Most C Cosmetics Shop mns[[0] + list(range	(4, dammam_merged.shap  Common Venue 5th Most Co  Dessert Shop  (4, dammam_merged.shap  4th Most Common Venue 5t	mmon Venue 6th Most Cor Diner D  e[1]))]]  th Most Common Venue 6th	Discount Store  h Most Common Venue 7	Dog Run Don	er Restaurant h Most Common Venue	Donut Shop Eastern Euro	opean Restaurant  Oth Most Common Venue
am_me  Taif,  Taif,  Ream_me	nged.loc[dammam_merged['Clu Neighborhood 1st Most Comm Mecca, Saudi Arabia nged.loc[dammam_merged['Clu Neighborhood 1st Manis Mushait, Asir, Saudi Arabia	uster_Labels'] == 2,  mon Venue 2nd Most Co  Cable Car V  uster_Labels'] == 3,  Most Common Venue 2n  Burger Joint	dammam_merged.colum mmon Venue 3rd Most C Vomen's Store C dammam_merged.colum d Most Common Venue 3	mns[[0] + list(range ommon Venue 4th Most C Cosmetics Shop mns[[0] + list(range Grd Most Common Venue Hotel	(4, dammam_merged.shap  Common Venue 5th Most Co  Dessert Shop  (4, dammam_merged.shap  4th Most Common Venue 5t	mmon Venue 6th Most Cor Diner C  e[1]))]]  th Most Common Venue 6th Farm	h Most Common Venue 7	Dog Run Don th Most Common Venue 8ti Diner	h Most Common Venue	Oommon Venue 10th Most  Donut Shop Eastern Euro  9th Most Common Venue 1	Oth Most Common Venue  Doner Restaurant
Taif, Taif, KK	rged.loc[dammam_merged['Clu Neighborhood 1st Most Comm Mecca, Saudi Arabia rged.loc[dammam_merged['Clu Neighborhood 1st! amis Mushait, Asir, Saudi Arabia Medina, Saudi Arabia	uster_Labels'] == 2,  mon Venue 2nd Most Co  Cable Car V  uster_Labels'] == 3,  Most Common Venue 2n  Burger Joint  Hotel  Hotel	dammam_merged.colur mmon Venue 3rd Most C Vomen's Store C dammam_merged.colur d Most Common Venue 3 Gym Shopping Mall Café	ommon Venue 4th Most Cosmetics Shop  mns[[0] + list(range  mns[[0] + list(range  Brd Most Common Venue  Hotel    loe Cream Shop   Restaurant	(4, dammam_merged.shap  Common Venue 5th Most Co  Dessert Shop  (4, dammam_merged.shap  4th Most Common Venue 5th  Donut Shop  Coffee Shop  loe Cream Shop	mmon Venue 6th Most Cor  Diner D  e[1]))]]  th Most Common Venue 6th  Farm  Donut Shop  Coffee Shop	h Most Common Venue 7:  Dessert Shop Clothing Store	Dog Run Don th Most Common Venue 8ti Diner Mobile Phone Shop	h Most Common Venue  Discount Store  Café	Donut Shop Eastern Euro  9th Most Common Venue 1  Dog Run  Fast Food Restaurant	Oth Most Common Venue  Doner Restaurant  Gift Shop
5 Taif, 1 KH	nged.loc[dammam_merged['Clu Neighborhood 1st Most Comm Mecca, Saudi Arabia nged.loc[dammam_merged['Clu Neighborhood 1st Medina, Saudi Arabia Medina, Saudi Arabia Mecca, Saudi Arabia	uster_Labels'] == 2,  umon Venue 2nd Most Co  Cable Car V  uster_Labels'] == 3,  Most Common Venue 2n  Burger Joint  Hotel  Hotel  uster_Labels'] == 4,	dammam_merged.colur mmon Venue 3rd Most C Vomen's Store C dammam_merged.colur d Most Common Venue 3 Gym Shopping Mall Café dammam_merged.colur	mns[[0] + list(range ommon Venue 4th Most C Cosmetics Shop  mns[[0] + list(range  Hotel   loe Cream Shop   Restaurant  mns[[0] + list(range	(4, dammam_merged.shap  common Venue 5th Most Co  Dessert Shop  (4, dammam_merged.shap  4th Most Common Venue 5t  Donut Shop  Coffee Shop  Ice Cream Shop  (4, dammam_merged.shap	mmon Venue 6th Most Cor Diner D  e[1]))]]  th Most Common Venue 6th Farm Donut Shop Coffee Shop	h Most Common Venue 7:  Dessert Shop Clothing Store Lounge	Dog Run Don th Most Common Venue 8ti Diner Mobile Phone Shop Shopping Mall	h Most Common Venue  Discount Store  Café  Convenience Store	Donut Shop Eastern Euro  9th Most Common Venue 1  Dog Run  Fast Food Restaurant  Malay Restaurant	Oth Most Common Venue  Doner Restaurant  Gift Shop  Market

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.