Riyadh residential units rent rates

Forecasting the average rent rates for 2019 H1

Clustering Riyadh city districts

Riyadh City – The capital of Saudi Arabia

❝ Riyadh, Saudi Arabia's capital and main financial hub, is on a desert plateau in the country's center. Business district landmarks include the 302m-high Kingdom Centre, with a sky bridge connecting 2 towers, and 267m-high Al Faisaliah Centre, with a glass-globe summit. In the historical Deira district, Masmak Fort marks the site of the 1902 raid that gave the Al Sauds control of Riyadh.
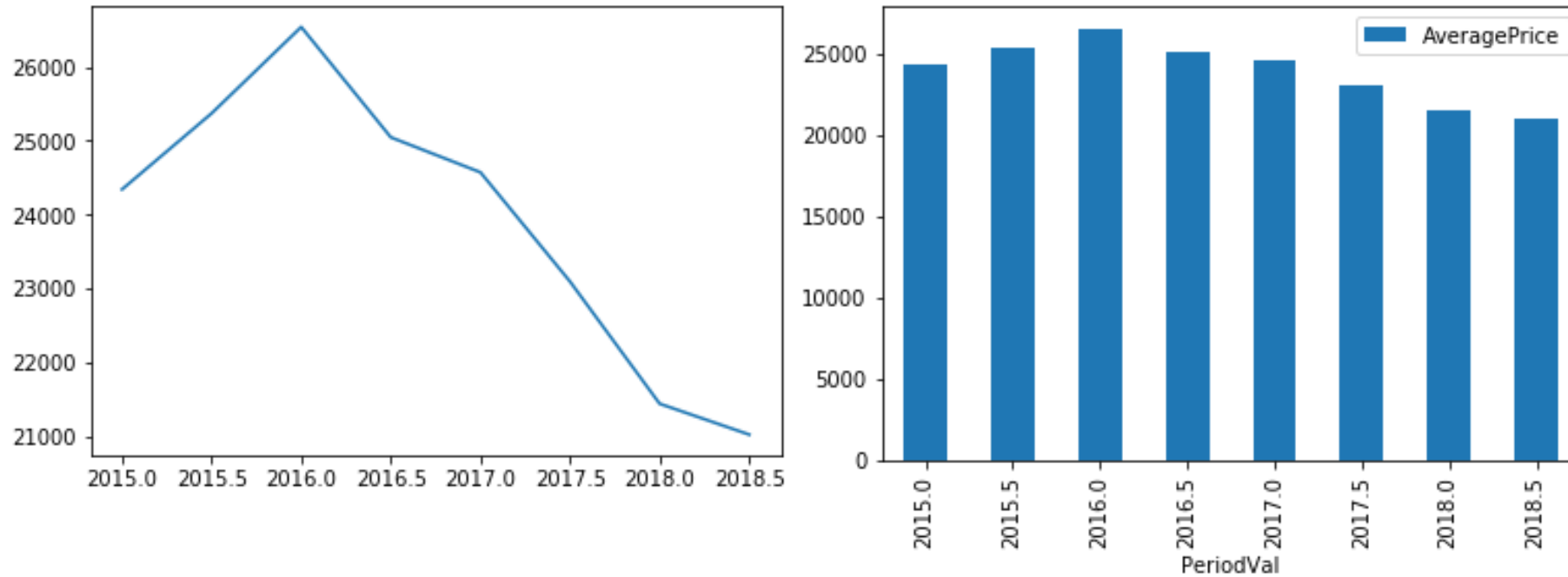
Area: 1,798 km^2 *Wikipedia.org*
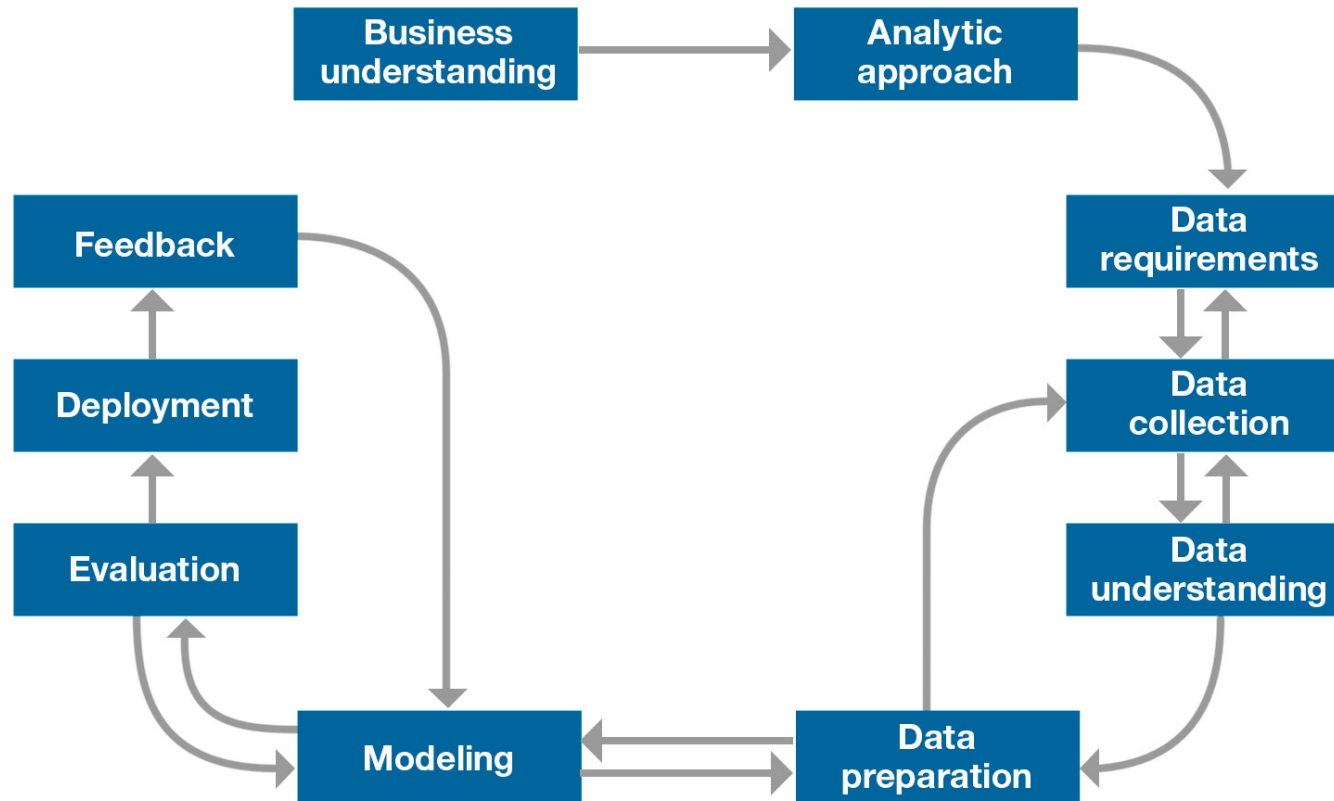
Elevation: 612m

Population: 5+ million

Residential units in Riyadh city rent rates are dropping

- Can we cluster Riyadh districts by venue categories features ?
- Can we forecast if prices will continue dropping during 2019 ?

Methodology

- IBM John Rollins Data Science Methodology followed in this project

Data Sources

- Api.address.gov.sa

- Aqar.fm

- FourSqare.com

Data collection and preparation:

|	minx	miny	maxx	maxy	Id	District	longitude	latitude
0	46.864206	24.515202	46.934238	24.575428	10100003028	المدينة الصناعية الثانية	46.898132	24.544378
1	46.692906	24.805834	46.717570	24.827157	10100003151	جامعة الامام محمد بن سعود الاسلامية	46.704854	24.816164
2	46.608821	24.709941	46.641148	24.738972	10100003166	جامعة الملك سعود	46.624481	24.724005
3	46.620812	24.477494	46.650098	24.503146	10100003059	احد	46.634999	24.489921
4	46.774065	24.781280	46.811468	24.805064	10100003137	اشبيلية	46.792184	24.792802
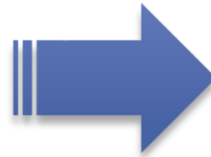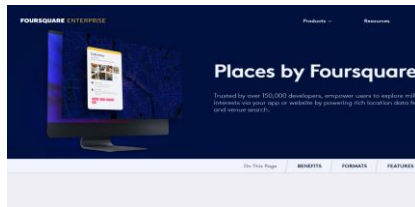
|	Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
0	اشبيلية	Donut Shop	Dessert Shop	Fast Food Restaurant	Coffee Shop	Middle Eastern Restaurant	Gym / Fitness Center	Supermarket	Sandwich Place	Ice Cream Shop	Pizza Place
1	الازدهار	Coffee Shop	Cosmetics Shop	Juice Bar	Pharmacy	Breakfast Spot	Dessert Shop	Restaurant	Burger Joint	Health Food Store	Ice Cream Shop
2	الاندلس	Coffee Shop	Ice Cream Shop	Middle Eastern Restaurant	Donut Shop	Fast Food Restaurant	Pharmacy	Breakfast Spot	Pizza Place	Bakery	Café
3	البديعة	Coffee Shop	Fast Food Restaurant	Park	Grocery Store	Café	Donut Shop	Pizza Place	Farm	Ice Cream Shop	Convenience Store
4	التعاون	Coffee Shop	Ice Cream Shop	Pharmacy	Fast Food Restaurant	Burger Joint	Restaurant	Donut Shop	Gift Shop	Dessert Shop	Café
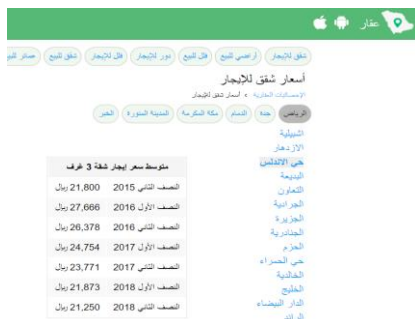
	Period	Neighborhood	Year_Half	Year	AveragePrice	PeriodVal
0	النصف الأول 2015	اشبيلية	0.0	2015	24138	2015.0
1	النصف الثاني 2015	اشبيلية	0.5	2015	24626	2015.5
2	النصف الأول 2016	اشبيلية	0.0	2016	23944	2016.0
3	النصف الثاني 2016	اشبيلية	0.5	2016	22871	2016.5
4	النصف الأول 2017	اشبيلية	0.0	2017	22625	2017.0
5	النصف الثاني 2017	اشبيلية	0.5	2017	20616	2017.5
6	النصف الأول 2018	اشبيلية	0.0	2018	19205	2018.0
7	النصف الثاني 2018	اشبيلية	0.5	2018	18076	2018.5
8	النصف الثاني 2015	الازدهار	0.5	2015	34181	2015.5
9	النصف الأول 2016	الازدهار	0.0	2016	33600	2016.0

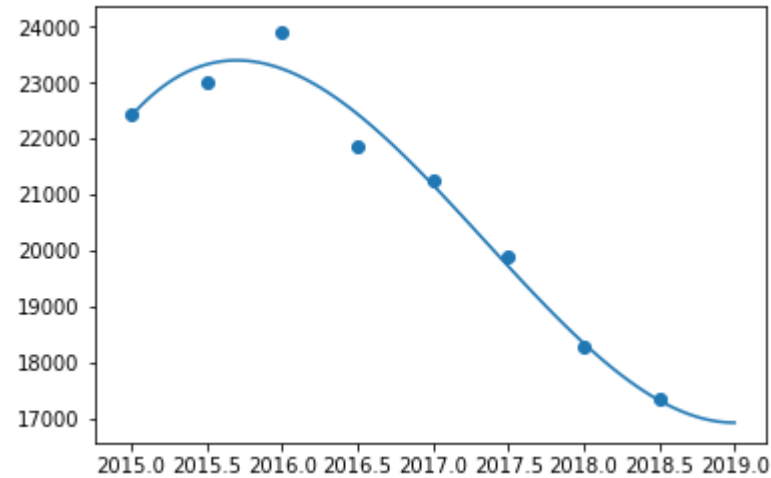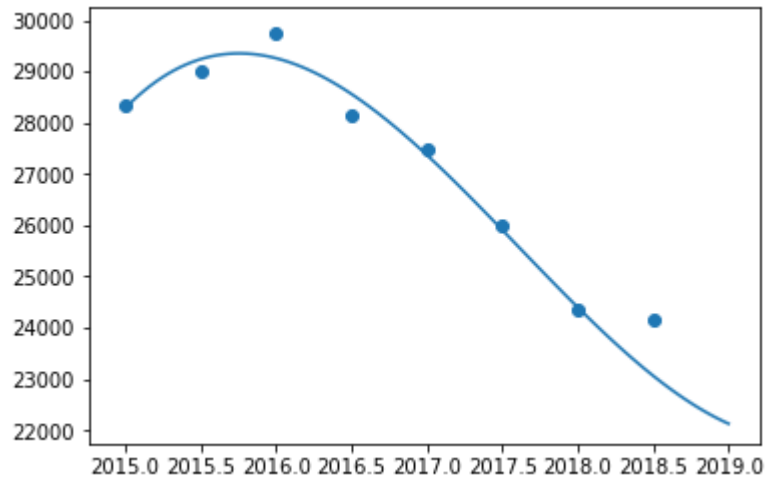# Modeling – KMeans Clustering
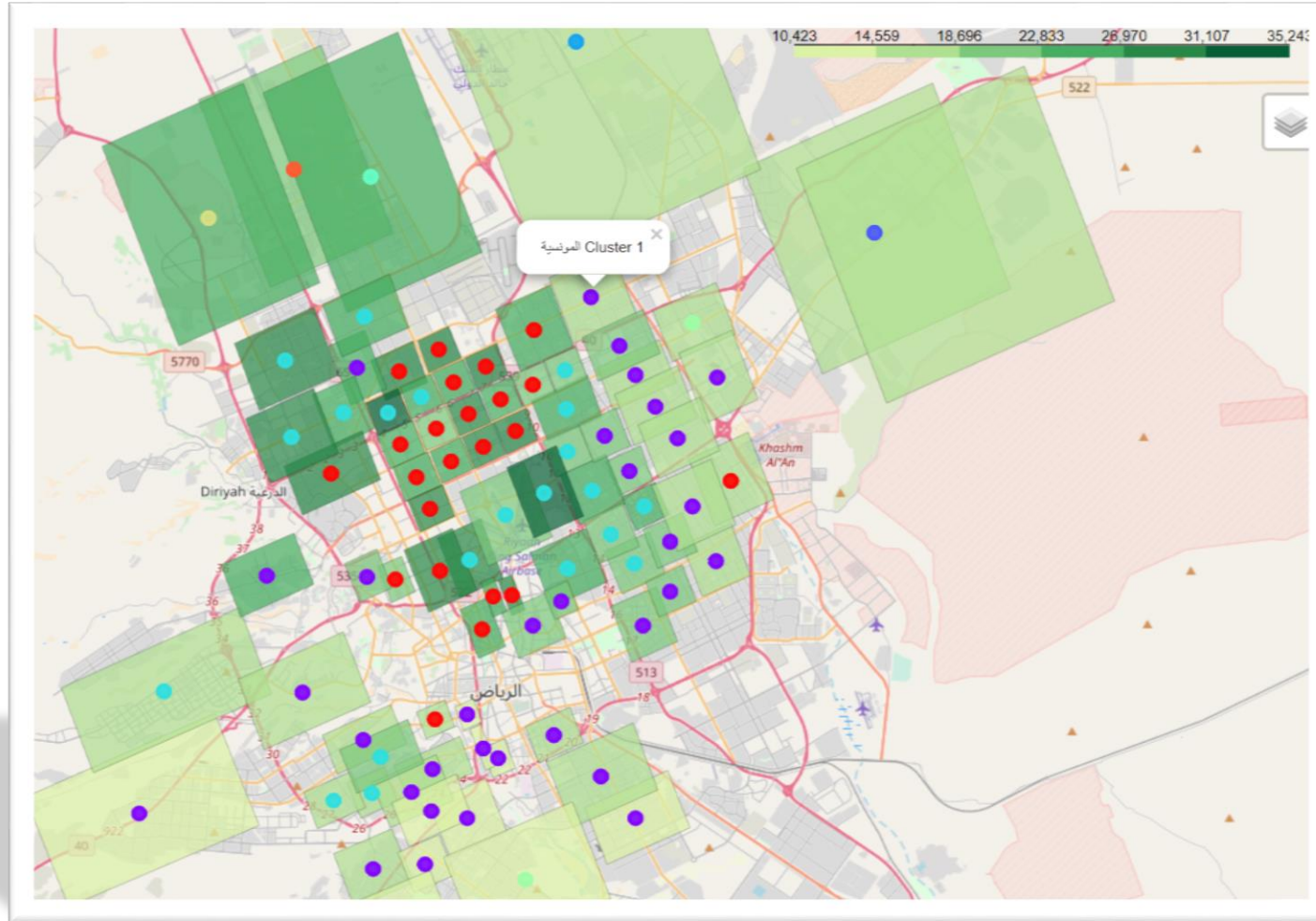
Modeling – Regression
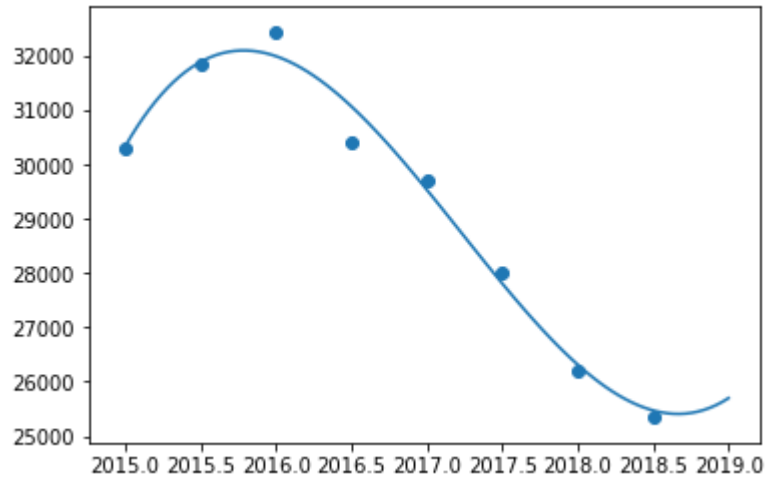
Cluster 0

Cluster 1

Cluster 4

Insights

- Districts in cluster 0 have highest average residential units rent prices and it is forecasted to increase slightly during 2019 H1.

- Districts in cluster 1 have lowest average residential units rent prices and it is forecasted to continue dropping during 2019 H1.

- Districts in cluster 4 have medium to high average residential units rent prices and it is forecasted to continue dropping during 2019 H1.

- Districts in cluster 0 have Cafés and Hotels as most common nearby venues.

- Districts in cluster 1 have Fast food restaurants and Middle eastern restaurants as most common nearby venues.

- Districts in cluster 4 have Cafés and Desserts shops as most common nearby venues.

Thank You

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