

Housing Sales Prices and Venues Data Analysis of Melbourne, Australia

Coursera Capstone Project

Finding affordable AND convenient housing in a new city is a nightmare for most

- People of all kinds from across the globe flock to Melbourne, Australia for various reasons, with some of them aspiring to make this incredible place a home of their own
- With varying budgets and needs, people find it very challenging to discover a suitable place with neighbourhood amenities of their choice
- This project is aimed for people looking for acquiring new properties in Melbourne, but are sceptical due to lacking knowledge and volatile market conditions

Data acquisition and cleaning

For this data analysis project, the following data/dataset are used:

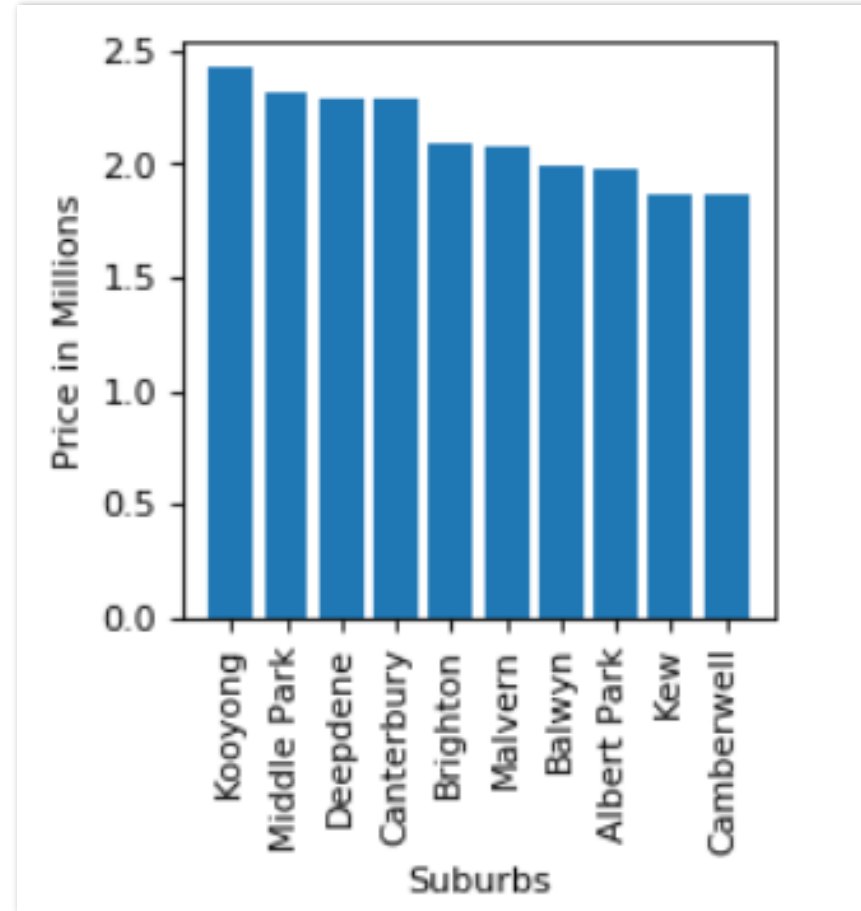
- Melbourne Housing Dataset (Kaggle)

This data was scraped from publicly available results posted every week from *Domain.com.au*. The dataset has been cleaned, and now it is available for us folks (data analysts) to do some data analysis magic

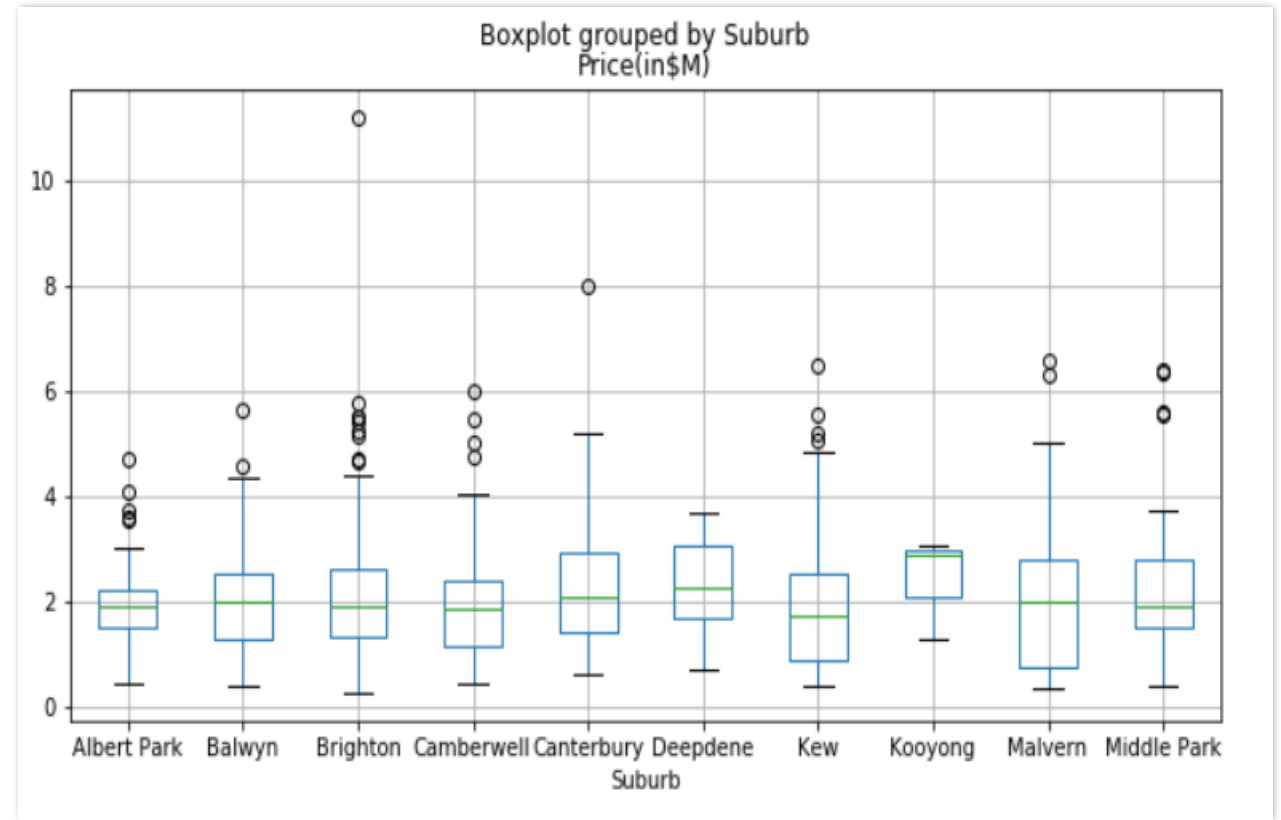
- Foursquare API

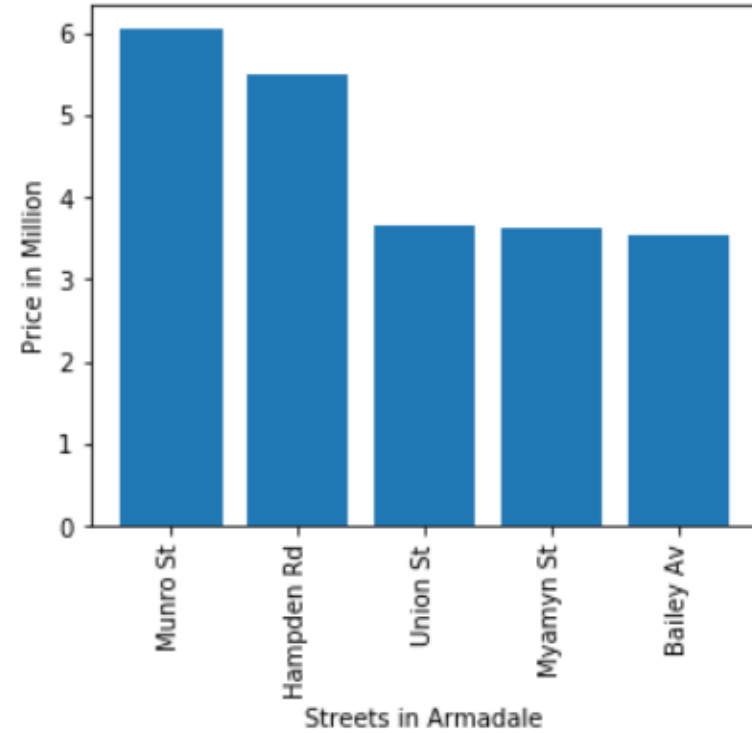
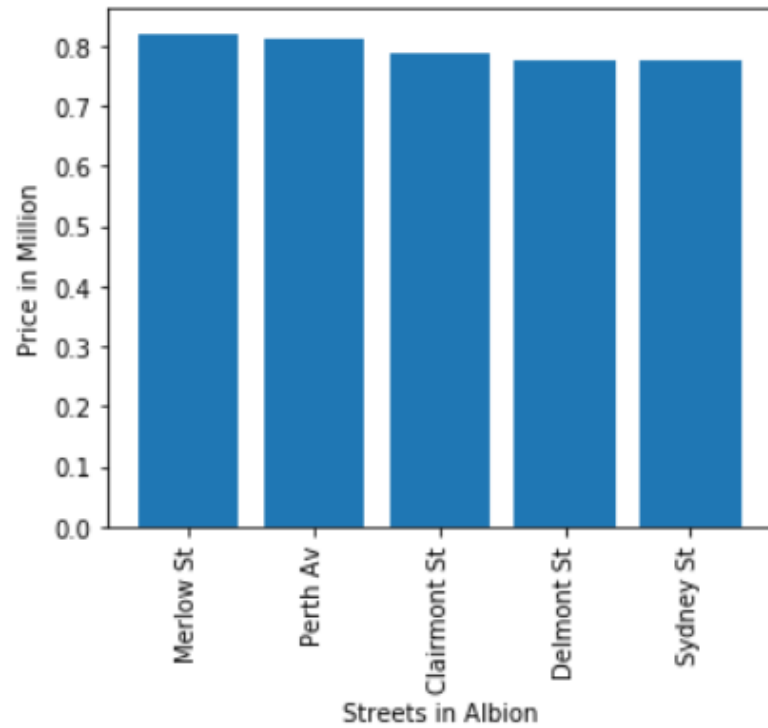
To determine the various amenities in the proximity of a desired location, Foursquare location data is used.

Analysing average housing prices for each suburb in Melbourne



Analysing average housing prices for each suburb in Melbourne





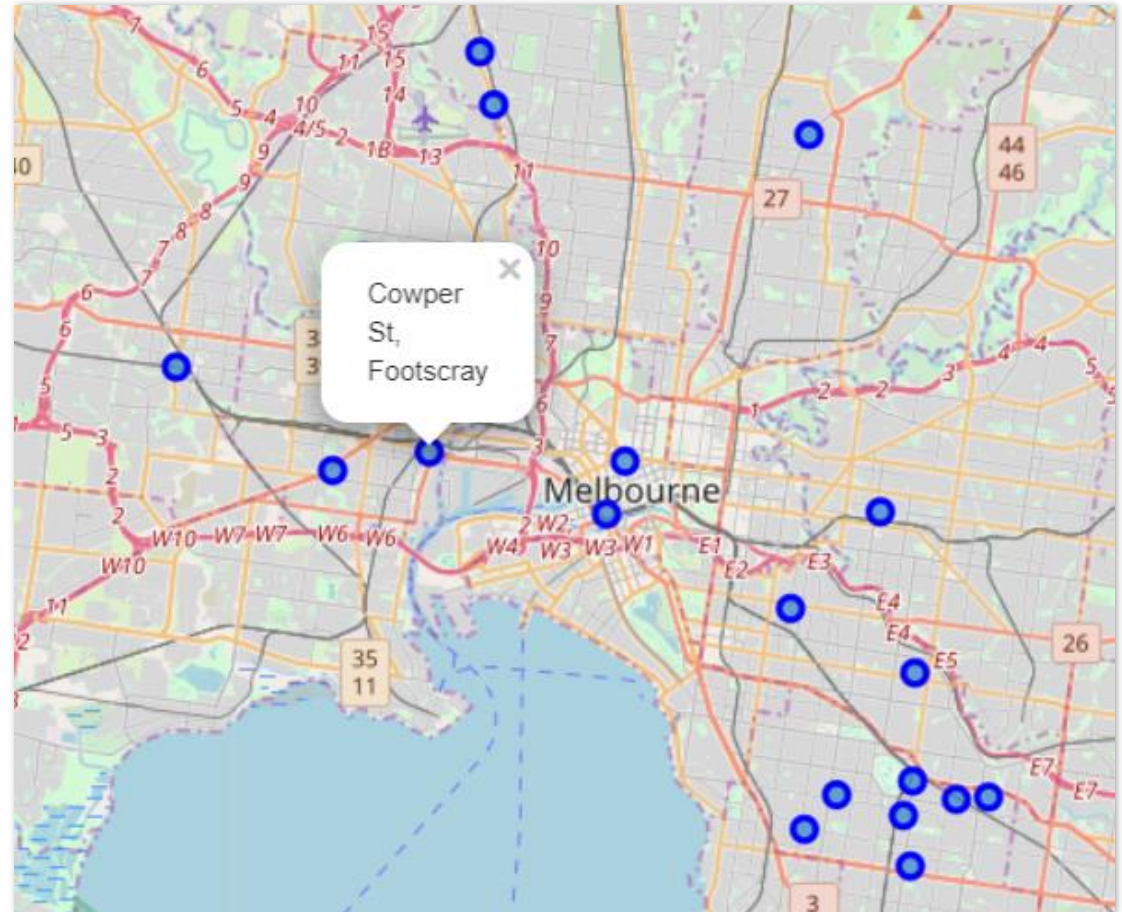
Analyzing average housing prices for each street in each suburb in Melbourne

Recommending streets based on client budget (first phase)

Client budget: AU\$ 0.3M

		Price(in\$M)	Lattitude	Longitude
Suburb	StreetAddress			
Albion	Anderson Rd	0.268333	-37.78520	144.82720
Bacchus Marsh	Lidgett St	0.285000	-37.67344	144.43181
Carnegie	Jersey Pde	0.255000	-37.88750	145.05990
Caulfield	Pyne St	0.131000	-37.88640	145.02420
Caulfield East	Tattenham St	0.300000	-37.88299	145.04711

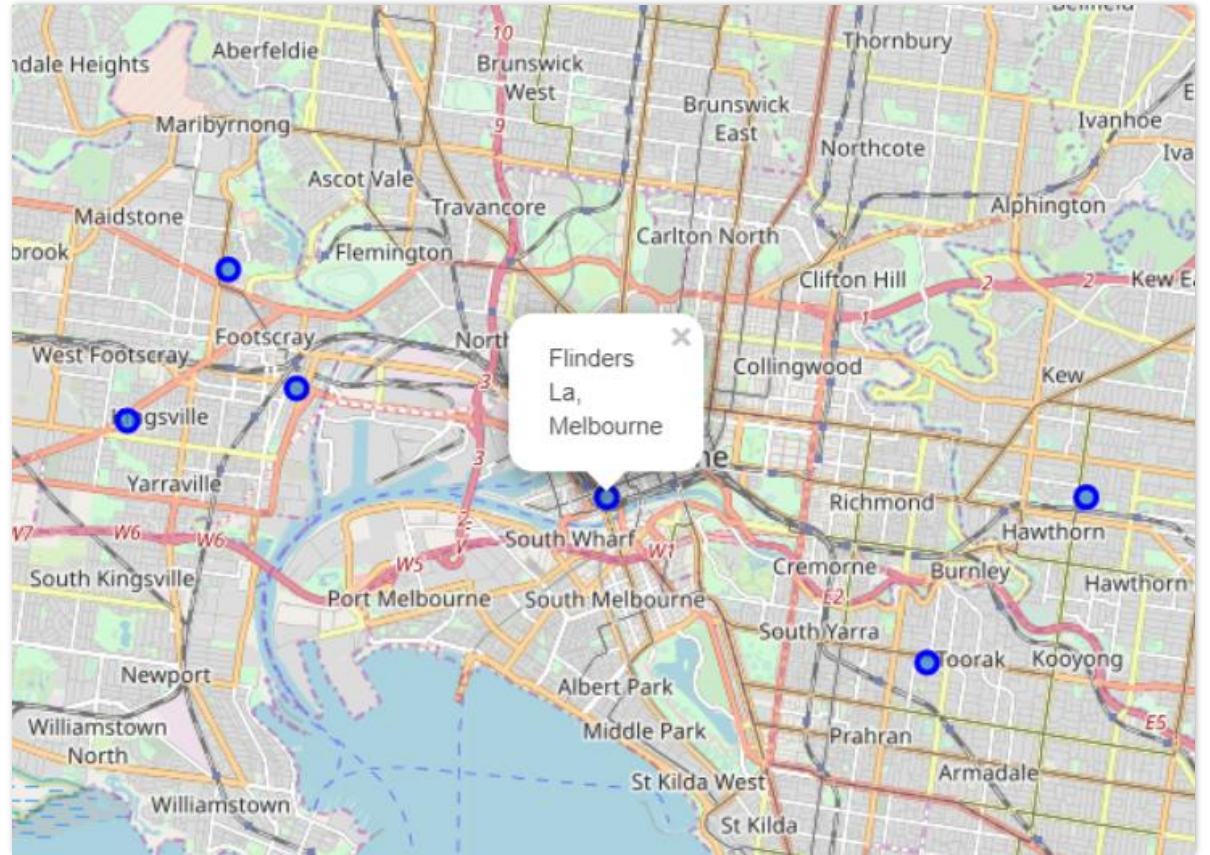
Plotting
recommended
locations/streets
on the map of
Melbourne with
current housing
market prices
(first phase)



Recommending top 15 streets with the most total number of nearby amenities (second phase)

	Suburb	Street	Amenities Count	Latitude	Longitude
0	Melbourne	Therry St	75	-37.80780	144.96100
1	Melbourne	Flinders La	66	-37.81990	144.95580
2	Hawthorn	Park St	44	-37.81980	145.03730
3	Carnegie	Jersey Pde	25	-37.88750	145.05990
4	Albion	Anderson Rd	12	-37.78520	144.82720
5	Melton	Barries Rd	11	-37.68755	144.56887
6	Footscray	Empire St	9	-37.78910	144.89120
7	Toorak	Canterbury Rd	9	-37.84210	145.01040
8	Glen Huntly	Rosedale Av	7	-37.89092	145.04392
9	Footscray	Cowper St	7	-37.80530	144.90290
10	Murrumbeena	Hobart Rd	7	-37.88670	145.06990
11	Kingsville	Lewis St	5	-37.80960	144.87400
12	Reservoir	Plenty Rd	4	-37.73040	145.01580
13	Bacchus Marsh	Lidgett St	4	-37.67344	144.43181
14	Epping	Rufus St	4	-37.64888	145.02313

Plotting recommended locations on the map of Melbourne (second phase)



Conclusion and future directions

The decision of a buyer is influenced by the familial needs, personal biases and so on. So, based on the findings summarized in the results and discussion sections, following conclusions can be made:

- While making recommendations to a prospective client, it is imperative to know his/her requirements besides the budget, which dictates his/her decision of buying the property largely. This would help to catch his/her attention
- Knowledge about the most recent market prices can be very helpful for the client and can help him take an informed decision