

Course4 Melbourne

restaurant analysis

The project is about to find Melbourne suburbs which are good to start a restaurant businesses. It uses k-means clustering to classify Melbourne suburbs, and then use Melbourne buildings and restaurants data to find out which suburbs have potential business opportunities and less competition.

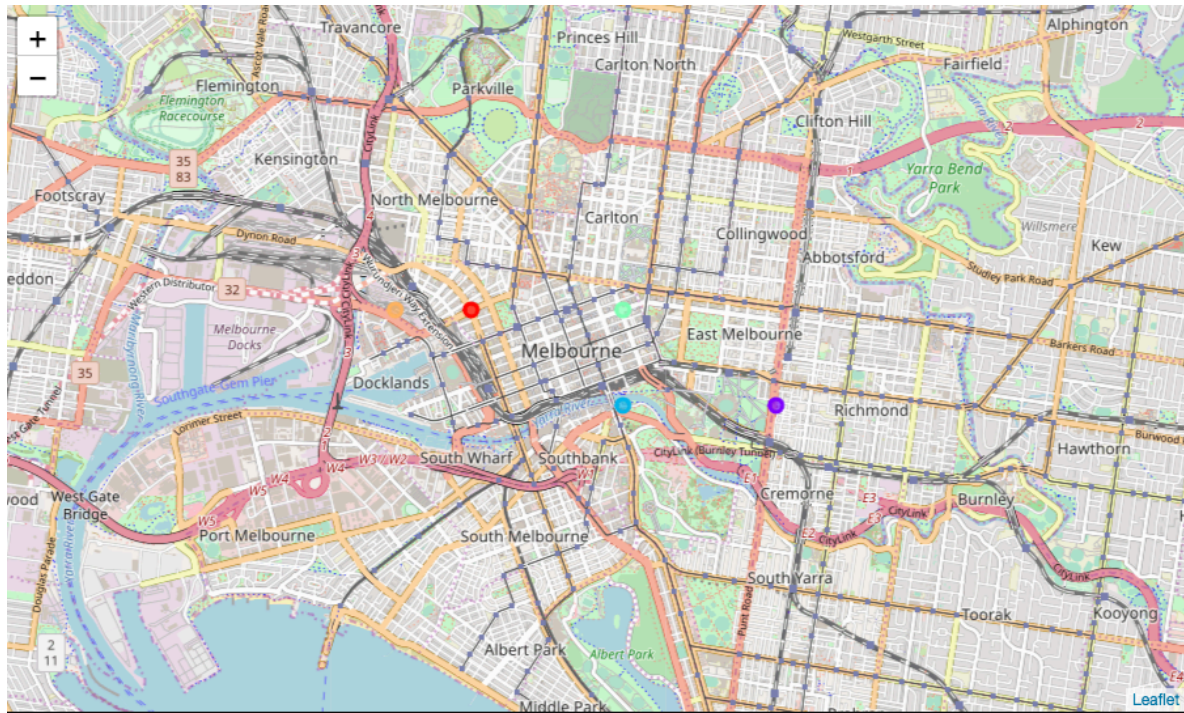
1, Parse Melbourne suburbs data from government website, to get suburb names, latitude and longitude data.

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: melbourne_data
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	Postcode	District	Neighborhood	latitude	longitude
0	3000	Melbourne	Melbourne	-37.81	144.970
2	3002	Melbourne	East Melbourne	-37.82	144.990
3	3003	Melbourne	West Melbourne	-37.81	144.940
7	3006	Melbourne	Southbank	-37.82	144.970
9	3008	Melbourne	Docklands	-37.81	144.950
319	3141	Melbourne	South Yarra	-36.99	144.060

2, use foursquare API to grab venue data, and then use the venue data to classify Melbourne suburbs.

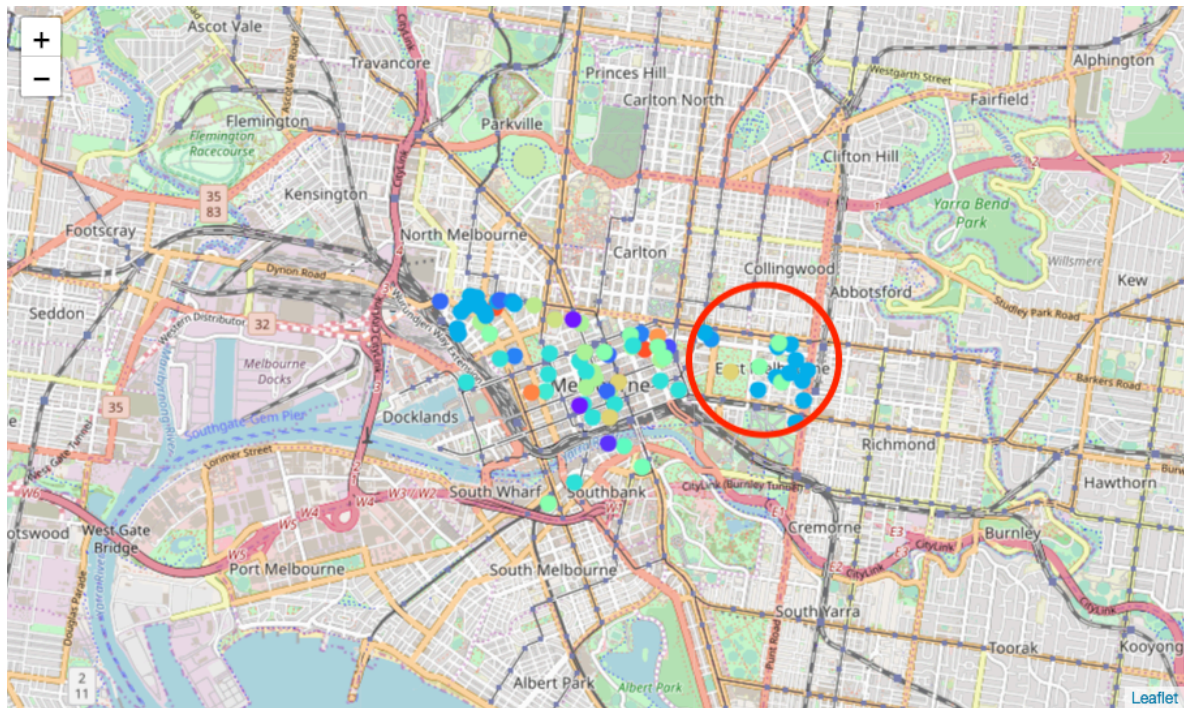
Base on the k-clustering analysis of Melbourne data(from Foursquare), East Melbourne has more pubs, cafes, but less restaurants.



	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	Docklands	Café	Indian Restaurant	Pub	Hotel	General Entertainment	Playground	Concert Hall	Pizza Place	Park	Gastropub
1	East Melbourne	Pub	Café	Breakfast Spot	Thai Restaurant	Coffee Shop	Convenience Store	Park	Clothing Store	Football Stadium	Sporting Goods Shop
2	Melbourne	Cocktail Bar	Bar	Italian Restaurant	Coffee Shop	Wine Bar	Hotel	Café	Japanese Restaurant	Dumpling Restaurant	Ramen Restaurant
3	Southbank	Theater	Bar	Art Gallery	Park	Coffee Shop	Australian Restaurant	Sushi Restaurant	Music Venue	Café	Sandwich Place
4	West Melbourne	Café	Shopping Mall	Sandwich Place	Dessert Shop	Gift Shop	Portuguese Restaurant	Men's Store	Light Rail Station	Women's Store	Grocery Store

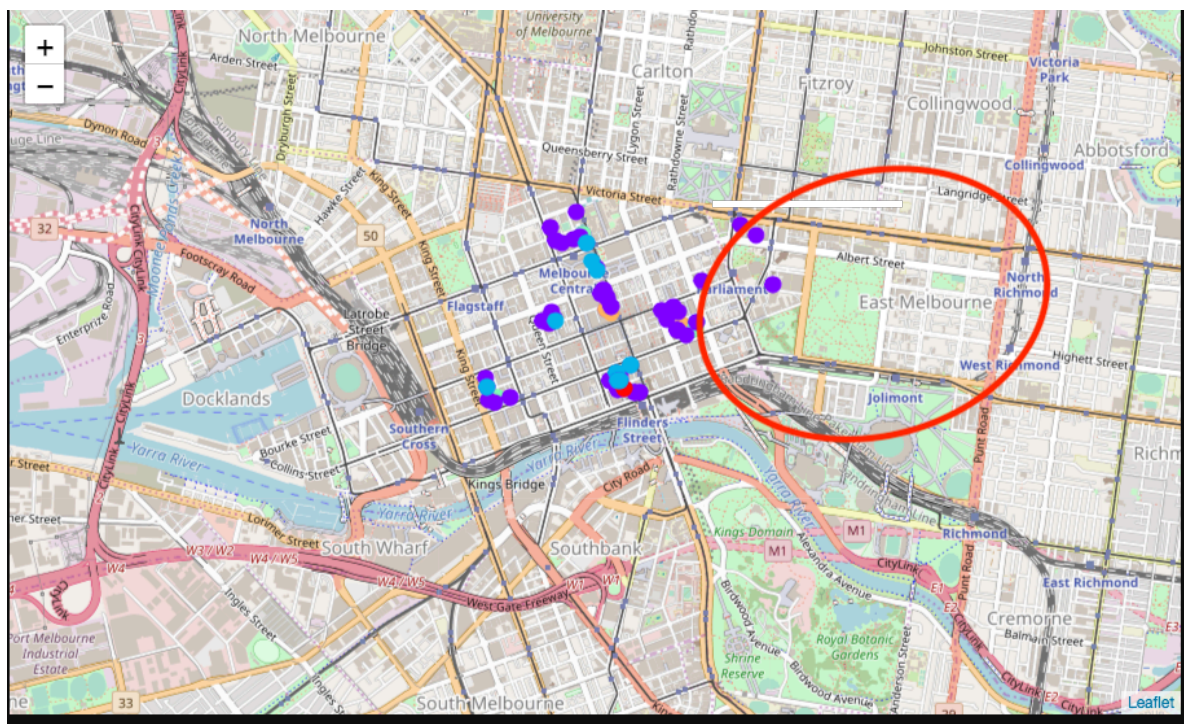
3, Visualize Melbourne building data on the map to find out which suburbs has more buildings. The more buildings means more business opportunities.

Base on the building location distribution, East Melbourne has lots accomandations(marked as blue). Which means there could be potential business opportunities for restaurants.



4, Use restaurants data to mark out potential competitors.

Base on the big restaurants distribution, East Melbourne doesn't have too many big restaurants, so to start restaurants in this area could have less competitors.



Conclusion: East Melbourne could be a good area to start restaurants because

it has more potential business opportunities but with less competition.