

WHERE TO OPEN A NEW VIETNAMESE RESTAURANT IN MELBOURNE?: NEIGHBOURHOOD SEGMENTATION & ANALYSIS



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OUTLINE



1. Introduction
2. Data Retrieval & Cleansing
3. Method
4. Results & Discussion
5. Conclusion

1.

INTRODUCTION

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- Melbourne (Australia): multicultural city, vast area
- Food service: thriving industry with good profit
- Project aim: identify potential locations to open a new Vietnamese restaurant in Melbourne
- Selection criteria:
 - Not overcrowded with existing restaurants
 - No Asian/Chinese/Vietnamese restaurants in close quarter (600 metres)
 - Close to Melbourne city centre (Melbourne CBD)

2.

DATA RETRIEVAL & CLEANSING



DATA RETRIEVAL & CLEANSING

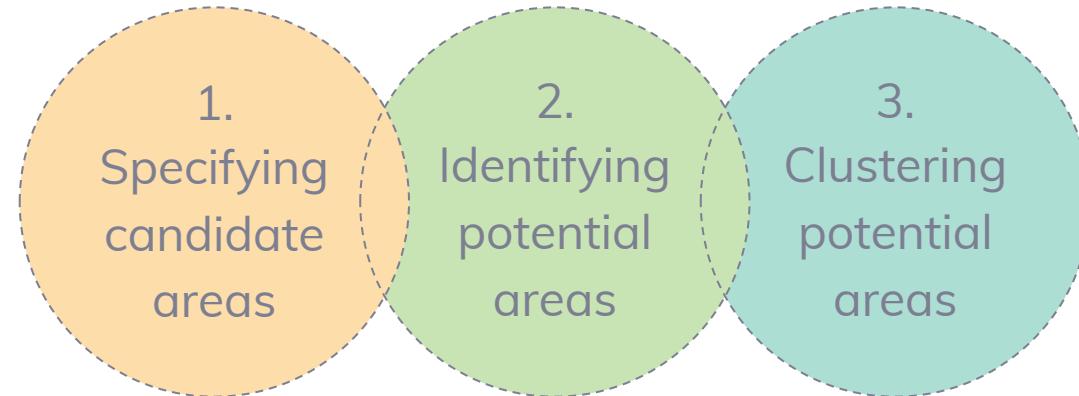
1. Geographical data: `geopy` is used to retrieve information about a location (coordinates & address)
2. Venue data: Foursquare API is used to retrieve data of venues in Melbourne
 - Only restaurants within 12km from Melbourne CBD
 - Asian/Chinese/Vietnamese restaurants are identified

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METHOD



METHOD: 3 STEPS

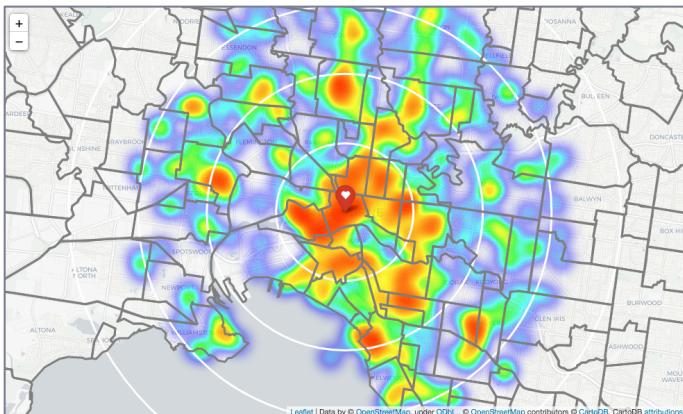


METHOD – STEP 1: SPECIFYING CANDIDATE AREAS

1. 314 candidate areas are specified:
 - Within 12km from Melbourne CBD
 - Radius = 600m
2. Venue data (Restaurants & Asian restaurants) are obtained using Foursquare API for the 314 areas
3. Exploratory analysis is performed on venue data:
 - # of restaurants in each area
 - Distance to nearest Asian restaurant from each area centre

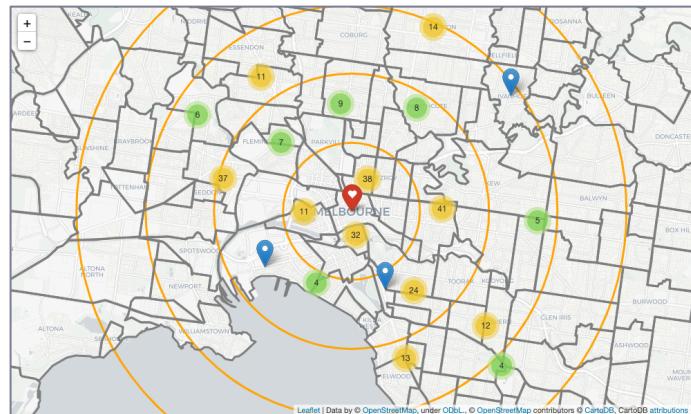
METHOD – STEP 2: IDENTIFYING POTENTIAL AREAS

1. Heatmaps & restaurant clusters to visually identify potential zones in the 314 areas:
 - Initial observation: East Melbourne, North Melbourne, Clifton Hill (north-east), and Parkville



Heatmap of all restaurants

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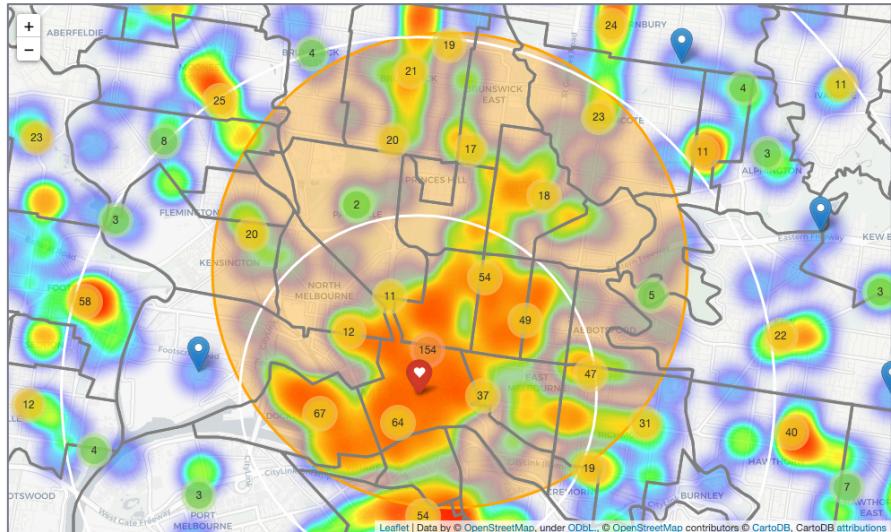


Clusters of Asian restaurants

METHOD – STEP 2: IDENTIFYING POTENTIAL AREAS

2. Narrow the area of interest
 - Radius = 4km
 - North-east of Melbourne CBD

The narrow area of interest



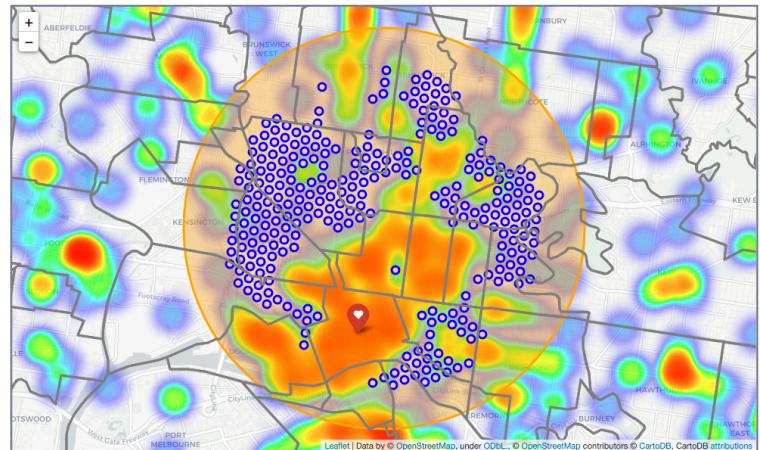
METHOD – STEP 2: IDENTIFYING POTENTIAL AREAS

3. 642 locations are specified within the area of interests (300m apart)
4. 642 locations are filtered based on 2 criteria:
 - no more than 1 restaurant in radius of 300m
 - no Asian restaurant in radius of 600m

→ 280 locations satisfy the conditions

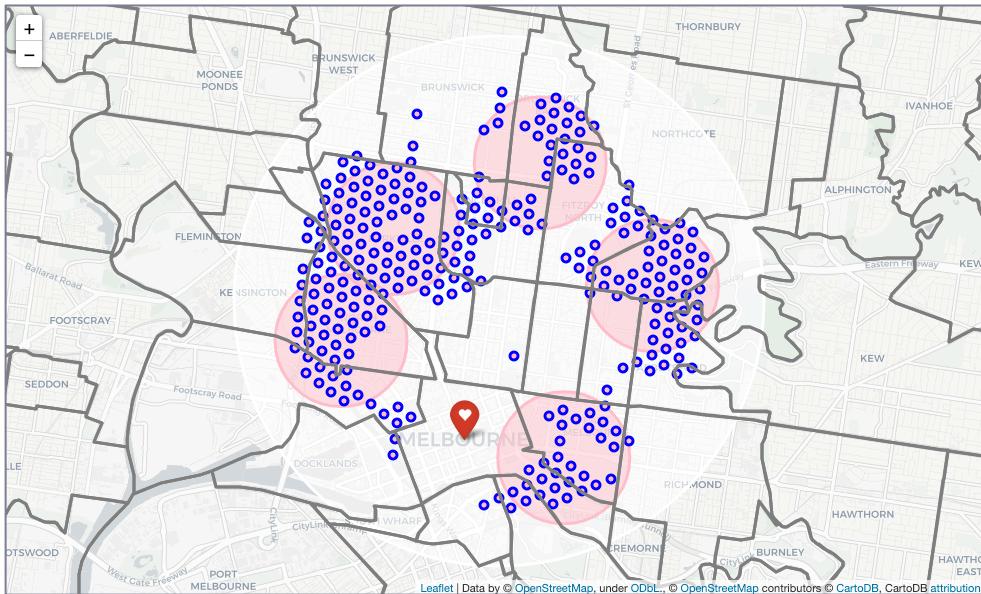
280 locations satisfying
the conditions

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METHOD – STEP 3: CLUSTERING POTENTIAL AREAS

k-Means is used to create 5 groups of locations



4.

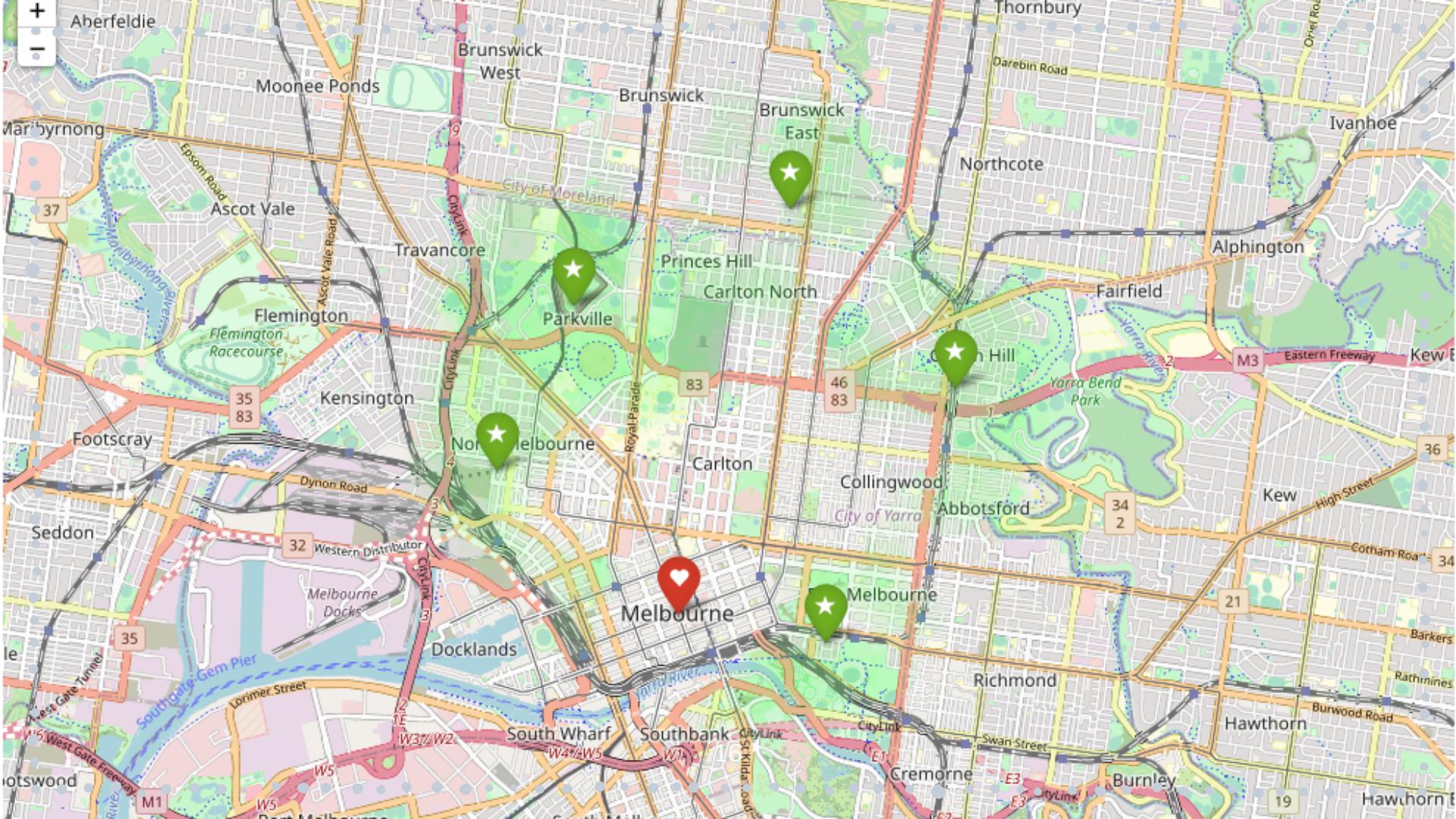
RESULTS & DISCUSSION



RESULTS & DISCUSSION

- 5 cluster centres are retrieved as recommended starting points for stakeholders

Address	Distance to Melbourne CBD
12, John Street, East Brunswick Village, Brunswick East	5.4 km
Melbourne Zoo, Poplar Road, Parkville, City of Melbourne	4.2 km
Parslow Street, Clifton Hill, City of Yarra	4.6 km
Wellington Parade South, East Melbourne, City of Melbourne	1.9 km
185, Arden Street, Hotham Hill, North Melbourne	3 km



5.

CONCLUSION



CONCLUSION

- The results can be used as preliminary recommendations for further physical exploration of potential areas to set up a new Vietnamese restaurant
- Limitations & Further Research:
 - Venue data from Foursquare: data might not be up-to-date
 - More criteria can be included, e.g., surrounding environment, foot traffic, rental price, parking meters.

THANK YOU!

