

Capstone Project - The Battle of Neighborhoods

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1. Introduction

Clients are looking forward to operating a new coffee shop in Australia. According to the Statista research, the coffee market is expected to grow annually by 7.5% (CAGR 2018-2021). Meanwhile, the competition is larger. To determine the best location of the new shop is the main purpose of this project

2. Business Problem

In general, the biggest challenge of starting a new business is looking for the most suitable place. Choosing an appreciate community is a well begin. As a data scientist, the following question should be solved:

1. The supply and demand of this sector of business (eg. does the market already saturated in that location?)
2. The average of income of that communities
3. The ancillary transport facilities

3. Data Section

The data will be used as follows:

1. Foursquare location data and geopy data to segment and cluster Neighborhoods in Australia. As well as analysis the ancillary transports facilities around Australia.
2. Australian Bureau Statistic Data set to analysis the median income by state
3. Combine above data to determine and answer of those business problem

4. Data Analysis

- 4.1 The Following Source are using for building up the data base
 - A. https://en.wikipedia.org/wiki/List_of_cities_in_Australia_by_population
 - B. <https://www.abs.gov.au/statistics/labour/earnings-and-work-hours/personal-income-australia/latest-release#state-comparison>
- 4.2 Merge List of cities in Australia with latitude and longitude data
- 4.3 Compare the average income by state/territory
- 4.4 Merge all above data into the same table
- 4.5 Visualized the data by marking the cites on the map

location data and geopy data to segment and cluster significant urban areas in Australia. As the result, Adelaide, Brisbane, Melbourne and Sydney had reached 100 venues. By compare to those urban areas, Sydney had the lowest frequency in average.

7. Conclusion

In conclusion, this project suggested that Sydney is the best location to start up a new cafe. The surrounding area have higher population rate and the average of income are sufficient enough.