

Capstone Project- The Battle of Neighborhoods

Greater Sydney Area, NSW

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Introduction/Background

Located on Australia's south-east coast in the state of NSW, Sydney is known as one of the most liveable cities in the world with breathtaking landscapes, beautiful beaches, iconic landmarks, and vibrant culture with multi-diversity. Sydney is the destination of choice for international corporations, business leaders, migrants, tourists and students.

Sydney is the largest and most populous city in Australia and the state capital of New South Wales. Inhabitants of Sydney are also called 'Sydneyiders', comprising of cosmopolitan and international population of people from numerous places around the world. State of NSW has about 128 local government areas and Sydney is made up of 35 local government areas which is further broken down into 658 suburbs [1].

Sydney is home to more than 5.2 million people (as of 2018). The population is growing significantly and it is forecasted to reach about 8 million by 2050.

Business Problem and Target Audience

Due to the massive popularity of Sydney as a top destination to live in and its growing population, it is obvious that more residential properties, shopping centers, hospitals, parks, hotels, bars etc. would be needed to be built to meet the demand and to aid this development one would need a wholistic view of different areas to make critical decisions.

This project will look into couple of most populous local government areas in Sydney, NSW and its suburbs to analyze what is the current situation at various neighborhoods in terms of population, crime rates, residents' income and types of venues/facilities available. Project will focus on characterizing similarities and differences between the areas of study.

The outcome of the project is anticipated to be quite useful to local/state government, town planner, property developer, potential startup business owner or even prospective home buyers.

Data Description:

- List of Local Government Area (LGA) of NSW: This is the list of LGAs in NSW available online. Since geojson file is available only for the whole state; we use this list for plotting the map area of the whole state. The subset of this list will form the scope of the project (focusing on Greater Sydney Area).
- List of State suburbs from Australian Bureau of Statistic: This is the neighborhood data mapped to LGA. It will be used to query Foursquare API to get venues and categories.
- Population data from Australian Bureau of Statistics: This has the absolute 2018 census data with population density per square km. It will be used to identify most populous area of Sydney.

- Income Distribution from Australian Bureau of Statistics: This data based on LGA has mean, median yearly income and also degree of inequality in terms of income share of top 10% earners.
- Crime Data from Australian Bureau of Statistics: This is LGA wise crime data with different types of crime and crime rates per 100,000 population over a period of one year from Oct 2018 to Sep 2019. This, along with income data will be used to profile different LGAs of our concern.
- Locality venues and categories from Foursquare API: This will be used to assist in clustering different neighborhoods based on frequency of occurrence of certain venue categories.

References

- [1] <https://www.cityofsydney.nsw.gov.au/learn/research-and-statistics/the-city-at-a-glance/greater-sydney>