

IBM Capstone Project

The Battle of Neighborhoods

“Recommending prime housing locations”

Contents Page

1. Introduction
2. Data
3. Methodology
4. Results
5. Discussion
6. Conclusion

1.1 Introduction

In Singapore, the large majority of land is government-owned. Thus, most of her citizens live in public housing on leased land. The Housing and Development Board (HDB), the government agency overseeing housing development, oversees and builds the majority of new housing; these types of flats are colloquially called “HDB flats” by locals.

The HDB and private developers secure land at auctions and some higher-end housing is hence privately developed. Singapore’s public housing, or HDB flats are commonly sold to middle-income buyers and they have the right to live in their flat until the building’s 99-year lease expires.

1.2 Business Problem

In this report, we will be taking up the hypothetical scenario as a local real estate agency that seeks to help middle-income buyers seek out prime housing locations in Singapore based on their preferences. Thus, the main objective of this project is to generate different HDB residential clusters to find the ideal group of HDB flats to recommend our clients to purchase.

2. Data

This report will utilise data from the following datasets and APIs,

1. <https://data.gov.sg/dataset/resale-flat-prices> — **Resale Flat Prices** on Data.gov.sg
2. <https://docs.onemap.sg/> — **OneMap API** to obtain the geo-coordinates in Singapore, specifically, planning areas as well as HDB flats in resale dataset
3. <https://developer.foursquare.com/docs/places-api/> — **Foursquare API** will be used to explore common venues surrounding the planning area in Singapore

1. Methodology section which represents the main component of the report where you discuss and describe any exploratory data analysis that you did, any inferential statistical testing that you performed, if any, and what machine learnings were used and why.
 2. Results section where you discuss the results.
 3. Discussion section where you discuss any observations you noted and any recommendations you can make based on the results.
 4. Conclusion section where you conclude the report.
3. Your choice of a presentation or blogpost. (10 marks)