APPLIED DATA SCIENCE CAPSTONE

CAPSTONE PROJECT

February 2020

Week 4 - Assignment

Selection of Your Dream House in Hong Kong

I. Introduction

According to the latest Annual Demographia International Housing Affordability Survey [1], housing in Hong Kong is rated the most expensive and least affordable in the world. Buying a property of your own is probably one of the most important decisions people make in their lives, hence careful considerations must be made as you surely will not want to buy a property that is unsuitable to you.

In Hong Kong, though a very small city, it is geographically and administratively divided into 18 areas named as the 18 districts of Hong Kong. Each district has its own characteristics e.g. the most famous district is probably Central and Western District which is a central business district area surrounded by skyscrapers, however what about the other districts' characteristics?

The target audience of this project is for the people who would like to buy their dream house in Hong Kong. Though these homebuyers most likely have their wish list of the criteria and features of the dream house they want e.g. preferred facilities available, target property price they can afford etc., there is no specific info available which not only centralize but also visualize them.

It is very easy especially for the first-time homebuyer to only focus in the district area they are currently living with their parents and miss out the opportunities in other districts area where they can find their desirable house meeting the criteria in their wish list. The objective of this project is to help these homebuyers to easily understand the characteristics of these 18 district areas by classifying these areas and visualizing them on the map with its average pricing. Essentially, it helps to answer the homebuyer's question: Which district area's characteristics meet most of my criteria of my dream house?

II. Data

Following data will be used for this project:
- List of districts: There are 18 geographically divided districts in Hong Kong which will be used for classifying the areas in Hong Kong [2]
- Hong Kong property statistics including the below: [3]
  - Average saleable areas of unit
  - Stock distribution by the age of private domestic
  - Latest transaction records in Jan-2020 including price per square feet
- Most common venues in every 18 districts in Hong Kong from Foursquare which we will be used for classification [4]

REFERENCE

[1]: **15th Annual Demographia International Housing Affordability Survey: 2019**
http://www.demographia.com/dhi.pdf

[2]: **Hong Kong 18 districts map**
http://opendata.esrichina.hk/datasets/eea8ff2f12b145f7b33c4eef4f045513_0?geometry=113.136%2C21.852%2C114.992%2C22.298

[3]: **Hong Kong property statistics Jan-2020 from one of the largest property agency - Centaline Property Agency Limited**
http://hkdata.centanet.com/BigData/hong-kong?field=T_POP&sort=default

[4]: **Foursquare**
https://foursquare.com/city-guide