

Coursea Capstone 2021

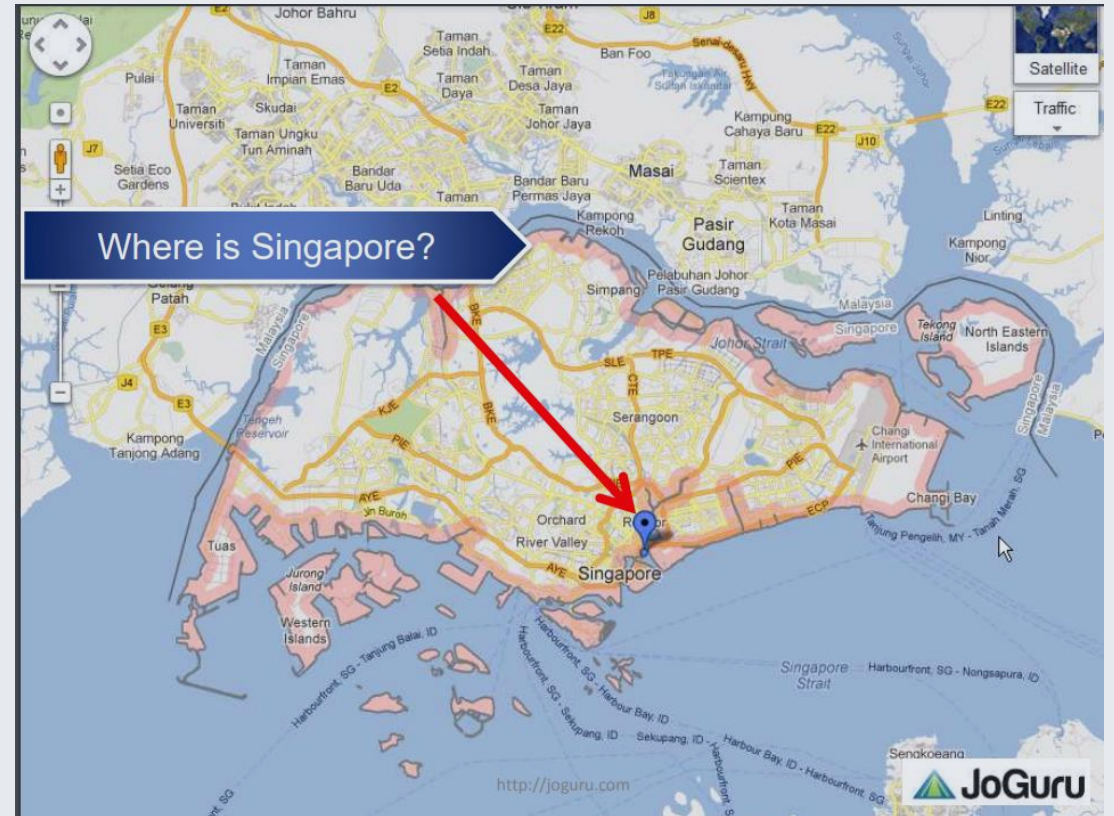
Singapore: a global city of opportunity

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INTRODUCTION

- 716,1 km² land area
- 46 km large
- 63 islands
- Many cultures :
 - Chinese (~74%)
 - Malay (~13%)
 - Indian (~9%)
 - others



BUSINESS PROBLEM

1. Analyze and provide insights into discovering ideal locations for people who are migrating such as housing prices and schools.
2. Offer them a look at which neighborhood might be the best fit for easy access to cafes, supermarkets, grocery shops, malls, theaters, etc.
3. Help people make smart and efficient decisions about which area and neighborhood to choose before moving to a new city, state, country

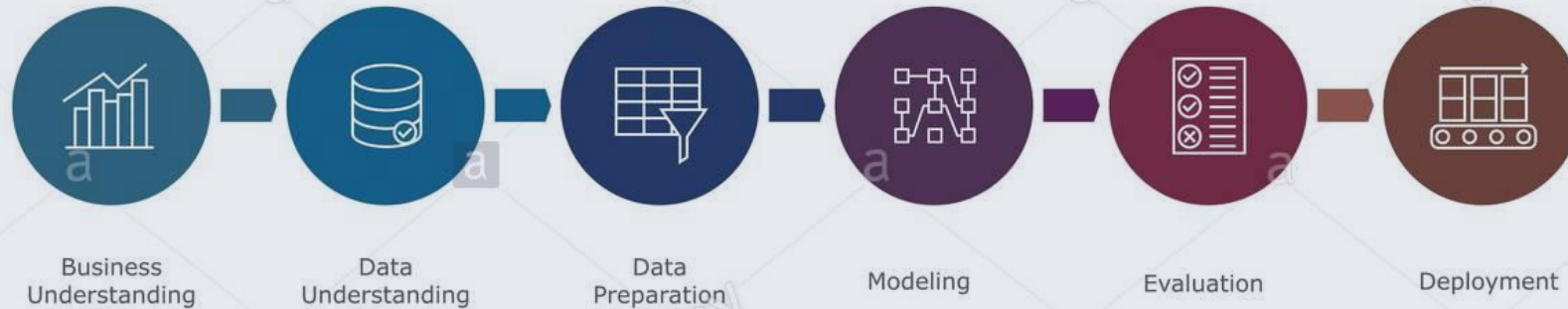
DATA

- The postal districts, sectors and general location of Singapore's neighborhoods.
- The latitude and longitude of the neighborhoods for visualization and plotting from the Python Geocode package.
- Private Property Transaction Data API (Feb 2019 to Feb-2021)
Private education institution by region
- FourSquare API to get the venues by district

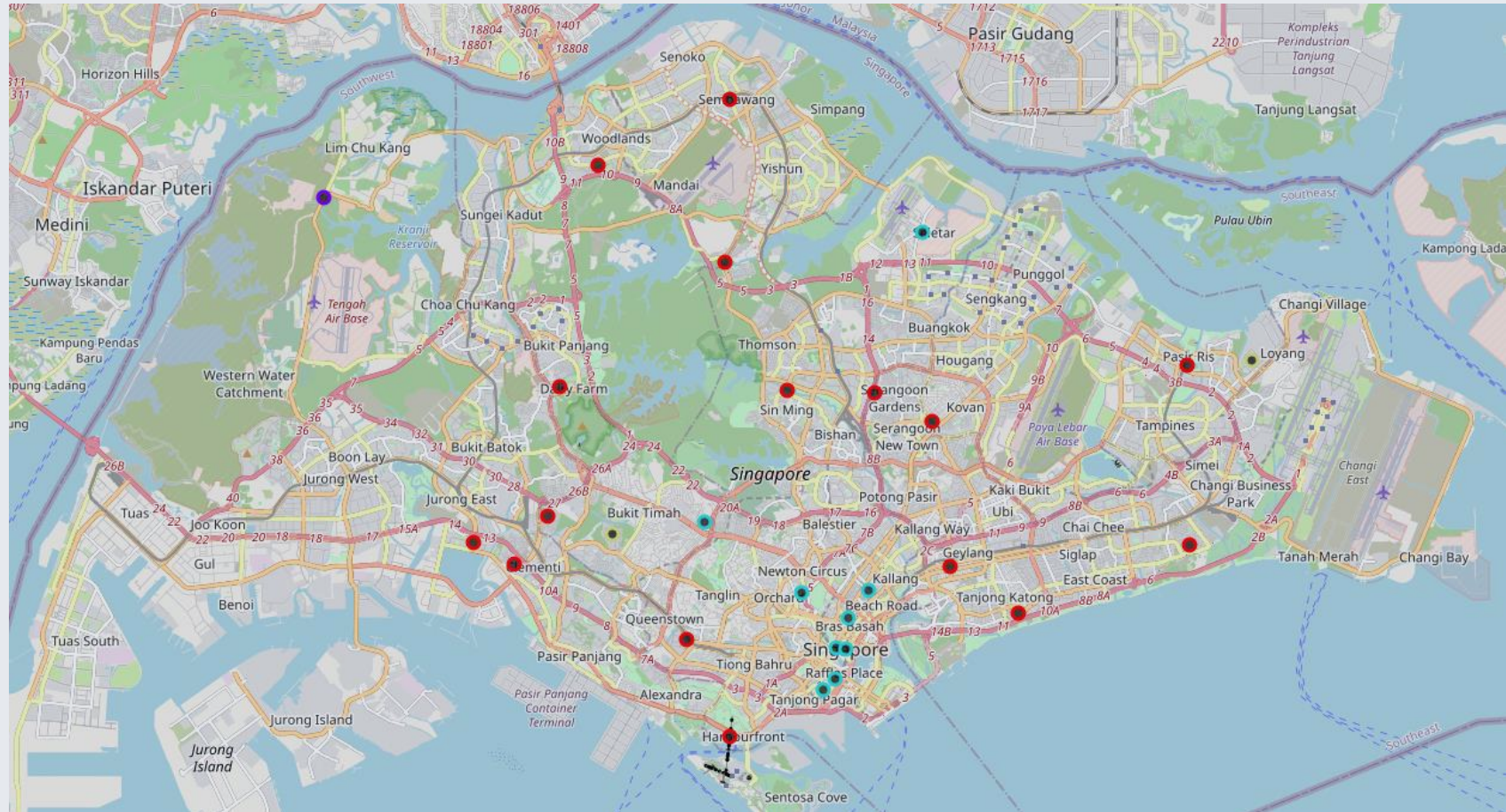
METHODOLOGY



Data Science Process

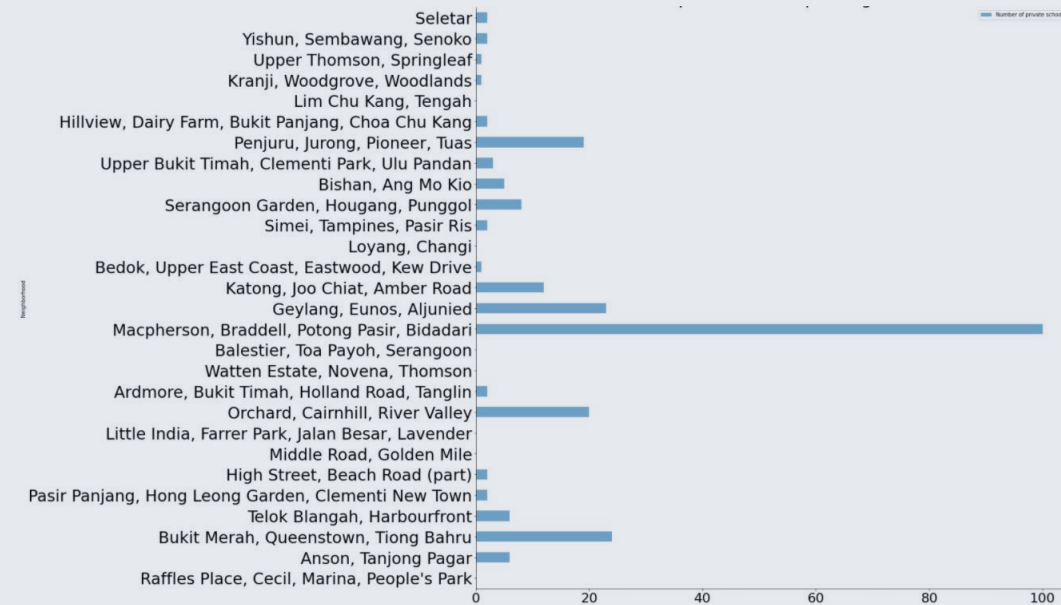


CLUSTERING : K-MEANS ALGORITHM

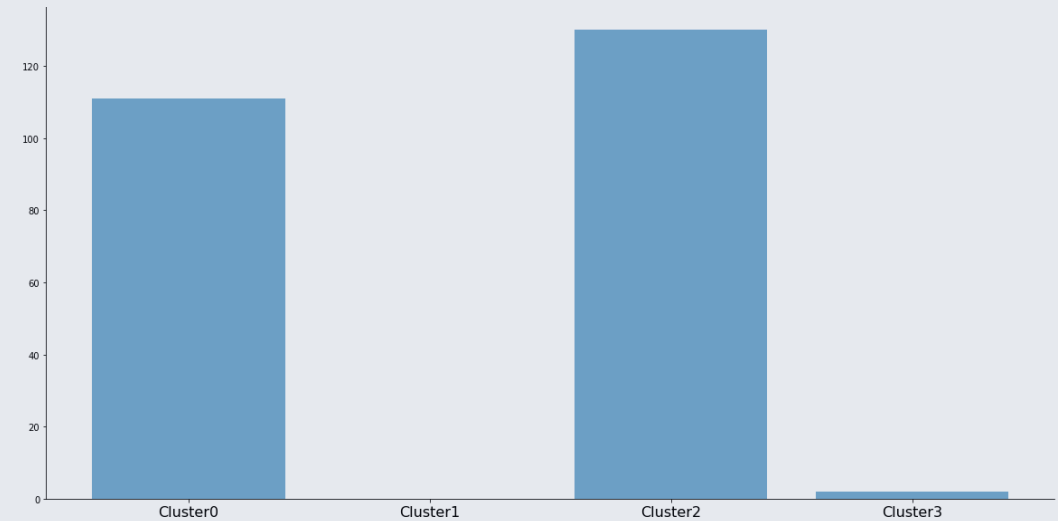


CLUSTERING : K-MEANS ALGORITHM

PRIVATE SCHOOL BY DISTRICT



PRIVATE SCHOOL BY CLUSTER

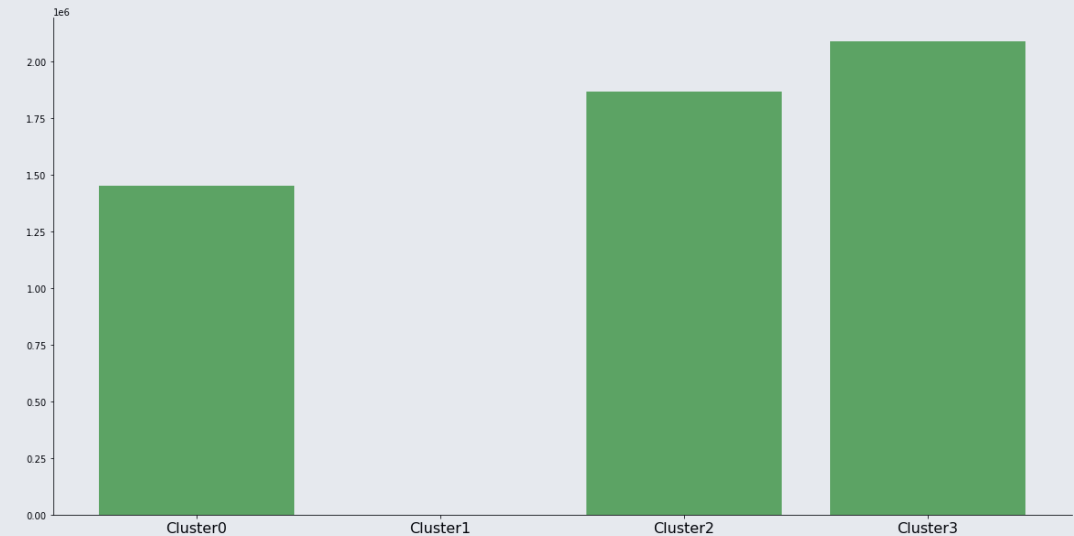


CLUSTERING : K-MEANS ALGORITHM

AVERAGE HOUSING SALE PRICE BY DISTRICT



AVERAGE HOUSING SALE PRICE BY CLUSTER



DISCUSSION

- Cluster 0 is the densest. It includes 16 of the 28 districts in Singapore. It's composed of very attractive venues such as food courts, supermarkets, hotels, coffee shop, dessert shop, parks, gyms, trails, shopping malls, restaurants (Asian, Chinese, Japanese), bakeries, etc.
- Cluster 2 is composed of 9 districts. It also presents attractive venues. One of the most common venues is hotels, boutiques, playground, waterfront, the airport, etc.
- Cluster 3 is composed of 2 districts. Its characterized by bus stations, government building, shopping malls, bar, restaurants, bookstore, etc.
- Cluster 1 is postal district 24

CONCLUSION

- **Cluster 0 and 2** are the most attractive one to explore or move into. With most of the private schools and average sales prices lower than cluster 3, they seem to be the clusters that have the most to offer.
- **Cluster 2** presents most of the hotels and the airport, it might be a more touristic area.
- **Cluster 0** might be the most appropriate to move into.