

## SUSS AVC2023

Group Name : Senquan

Members : Javen Lai Le Yu, Jana Haja Ahnaf, Muhammad Danny Bin Alfie Johari

Presenter : Javen Lai Le Yu

### Context:

The Housing and Development Board (HDB) resale market has been a pivotal part of the nation's housing landscape. From 2017 to 2020, this market has experienced drastic shifts influenced by various factors. Understanding the complexities of the market will provide essential information for homeowners, investors, policymakers, and real estate professionals.

### Issue:

Despite the availability of HDB resale market data, there exists a need to uncover the underlying trends, anomalies, and market dynamics that may not be interpreted through conventional analyses, so that **stakeholders can understand how various factors of an HDB flat influence its price to calculate a reasonable resale price for the flat.**

### Problem Statement:

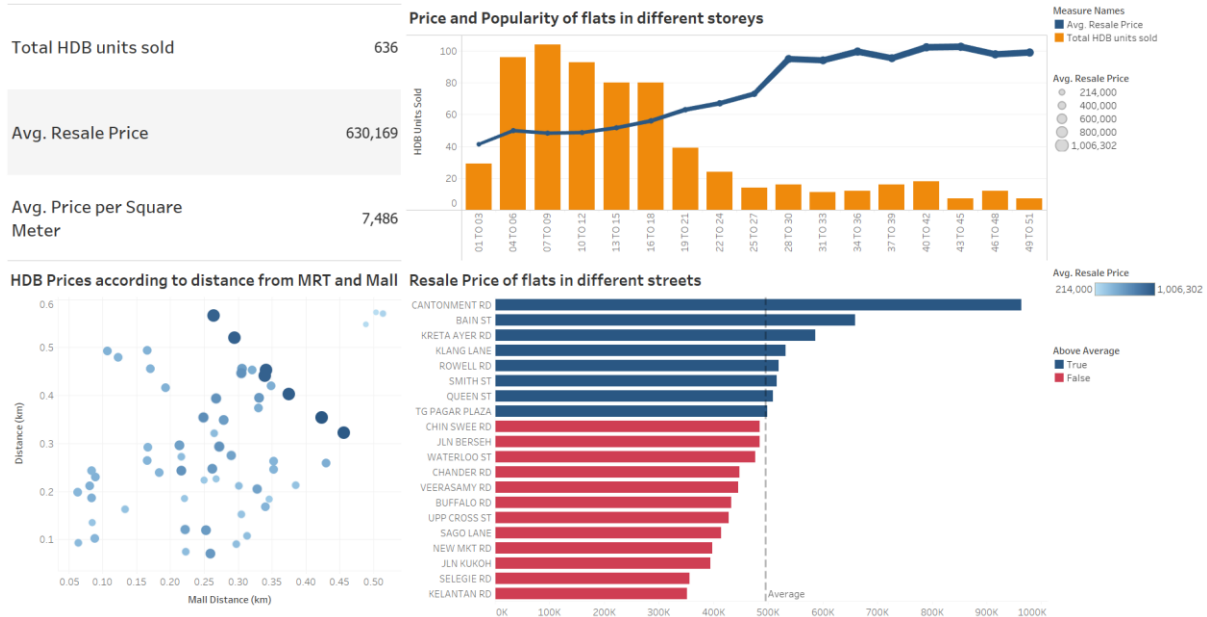
How can someone buying a resale HDB flat in the central area of Singapore determine its actual worth?

### Key Questions to Address:

1. Does the location (relative to a street) affect the resale price of a HDB flat?
2. Does having amenities like a mall or MRT nearby have a significant impact on the resale price?
3. Are there any interesting trends between the floor levels of HDB flats and their resale demand?
4. Can the resale price of a HDB flat in the central area be calculated?

## Dashboard:

### Central Area



### Explanation:

We used external datasets to obtain the names of malls and MRTs in Singapore, along with the coordinates of the HDBs. We used Python using Jupyter Notebook to calculate the distance between each HDB and its nearest Mall and MRT using their coordinates. To derive Price per square meter, we took the resale price divided by square area.

### Insights:

1. Most resale flats are on floors 4 to 18. There are only a few resale flats on floors 22 to 51.
2. Resale prices increase with the storey level. This could be due to scarcity in high-rise flats or Singaporeans preferring such flats.
3. HDBs in the central area have amenities (MRT and malls) within 0.6km - being nearer to an amenity does not necessarily lead to higher resale prices.
4. HDB flats along Cantonment Road have resale prices for twice the price of an average flat.

### Conclusion:

To estimate the resale price of a flat, multiply the flat's floor area with avg. price per square meter. Adjust the calculated price based on the street location and floor level of the flat. For example, if the flat is located along a street with below-average resale price, deduct based on how far the difference is. If the flat is along Cantonment Road, the price should be doubled. Lastly, the price can be increased slightly by 0.5-5% if the flat is located on floor 13 or above. Resale prices for Flats above floor 27 can be bumped up by 10-30%.