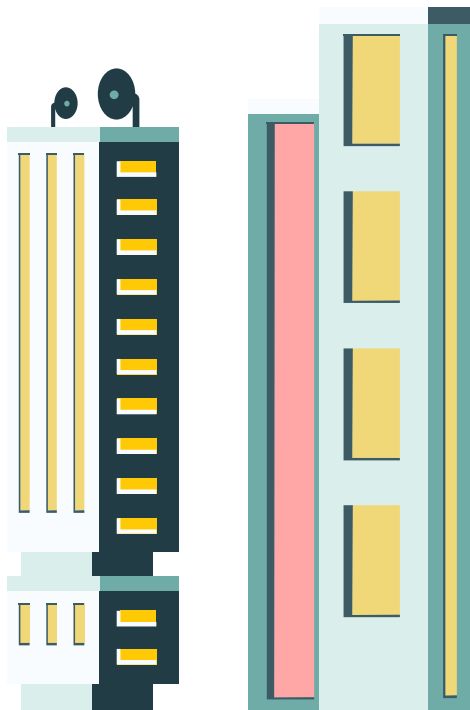


Project: Data Analysis

Singapore HDB Flat Resale Prices (2017-2020)

By Omar Temirgali



Map



Singapore

It's a sovereign island
city-state in maritime
Southeast Asia



Capital

Singapore



Currency

Singapore dollar



Population

5,914,000





Singapore HDB Flat Resale Prices

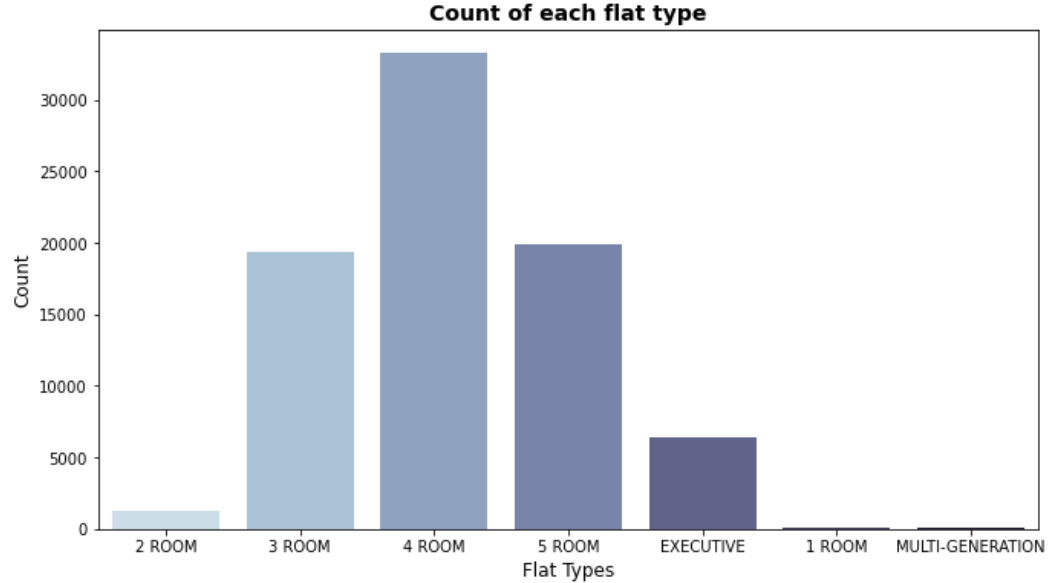
	year	town	flat_type	block	street_name	storey_range	floor_area_sqm	flat_model	lease_commence_date	remaining_lease	resale_price
0	2017-01-01	ANG MO KIO	2 ROOM	406	ANG MO KIO AVE 10	10 TO 12	44.0	Improved	1979	61 years 04 months	232000.0
1	2017-01-01	ANG MO KIO	3 ROOM	108	ANG MO KIO AVE 4	01 TO 03	67.0	New Generation	1978	60 years 07 months	250000.0
2	2017-01-01	ANG MO KIO	3 ROOM	602	ANG MO KIO AVE 5	01 TO 03	67.0	New Generation	1980	62 years 05 months	262000.0
3	2017-01-01	ANG MO KIO	3 ROOM	465	ANG MO KIO AVE 10	04 TO 06	68.0	New Generation	1980	62 years 01 month	265000.0
4	2017-01-01	ANG MO KIO	3 ROOM	601	ANG MO KIO AVE 5	01 TO 03	67.0	New Generation	1980	62 years 05 months	265000.0

The Housing & Development Board or often referred to as the Housing Board, is a statutory board under the Ministry of National Development responsible for Singapore's public housing.

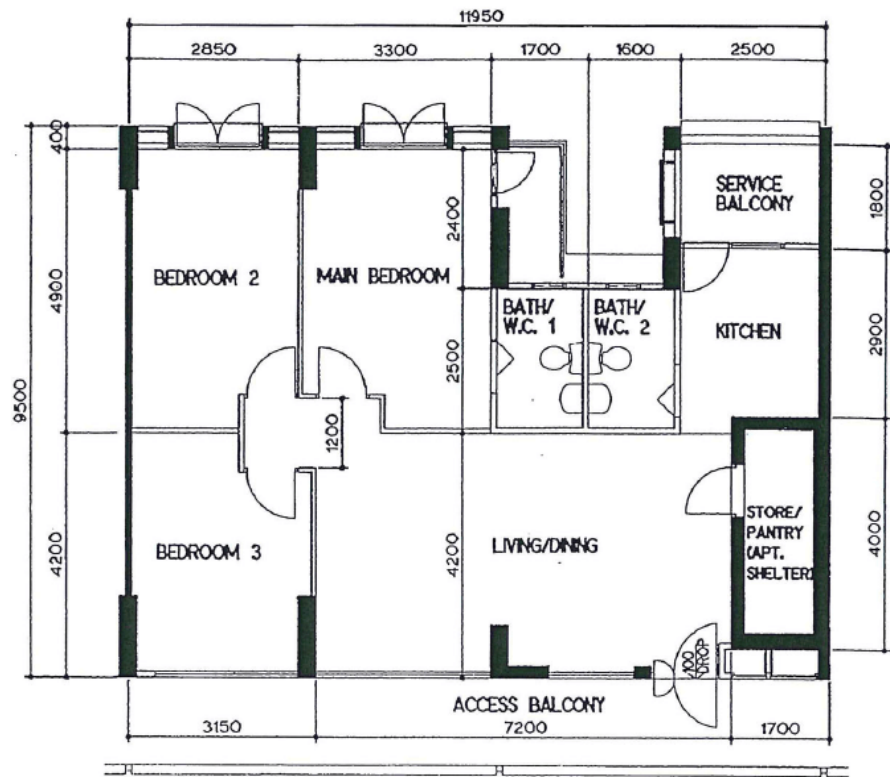
The dataset contains 11 columns, which covers transactions from 2017-2020. It includes features of the flat and sale, such as the year of sale, location of the flat, flat type, street name, block number, area of the flat, lease and resale price.

Flat Types

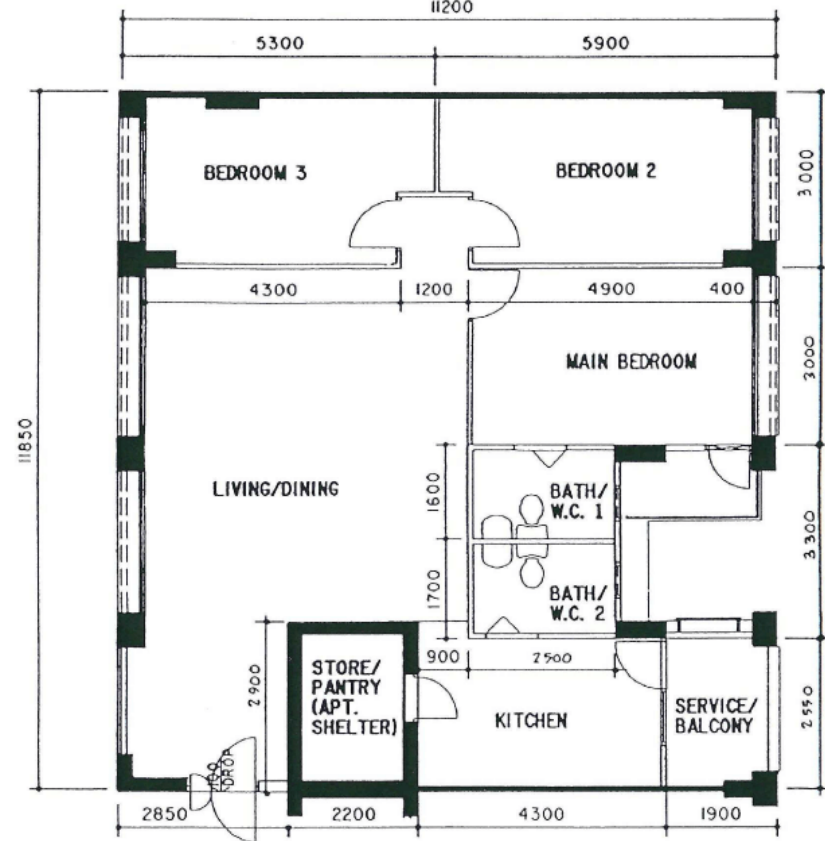
-  **Central Area**
-  **Woodlands**
-  **Bedok**
-  **Jurong East**



There are few 1 Room, 2 Room and Multi Generation flats. The most popular flat type on resale is 4 Room. There are 33282 4 Room flats and 19974 5 Room.

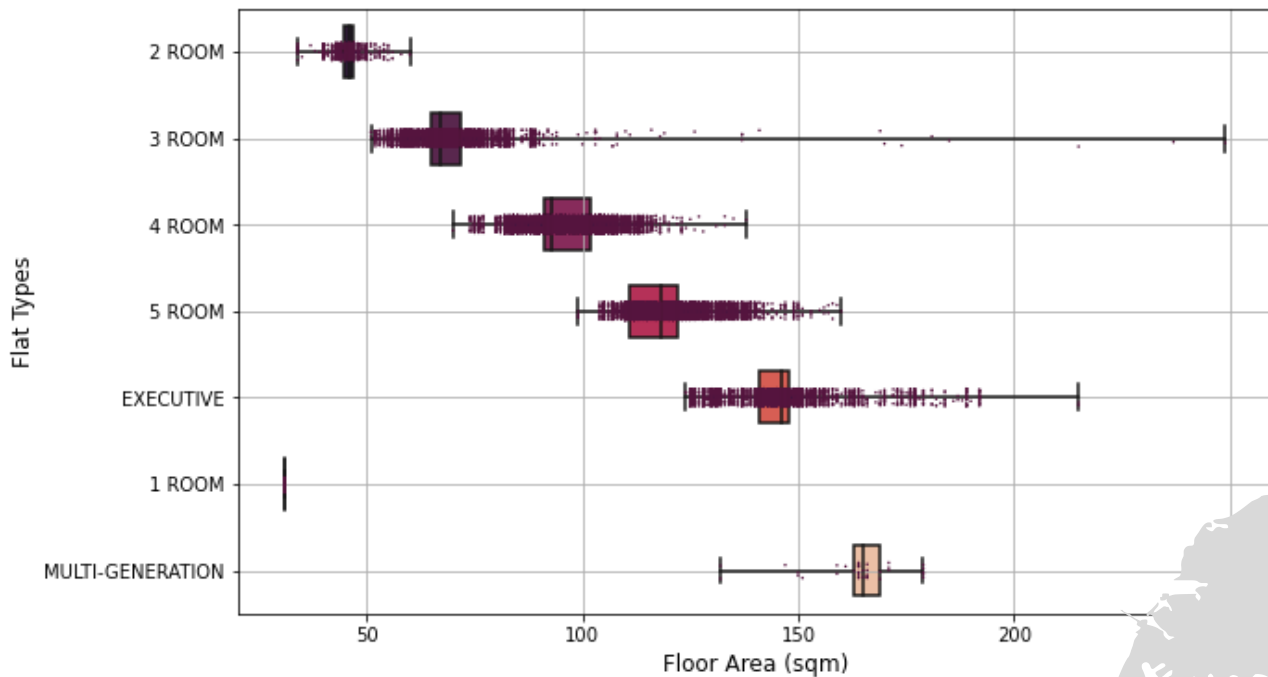


4-Room Apartment
Type 1(H)
Floor Area: 100m²



5-Room Apartment
Type 8
Floor Area: 122m²

Statistics of Flat Types By Floor Area



Flat Models



01

Model A

26288

02

Improved

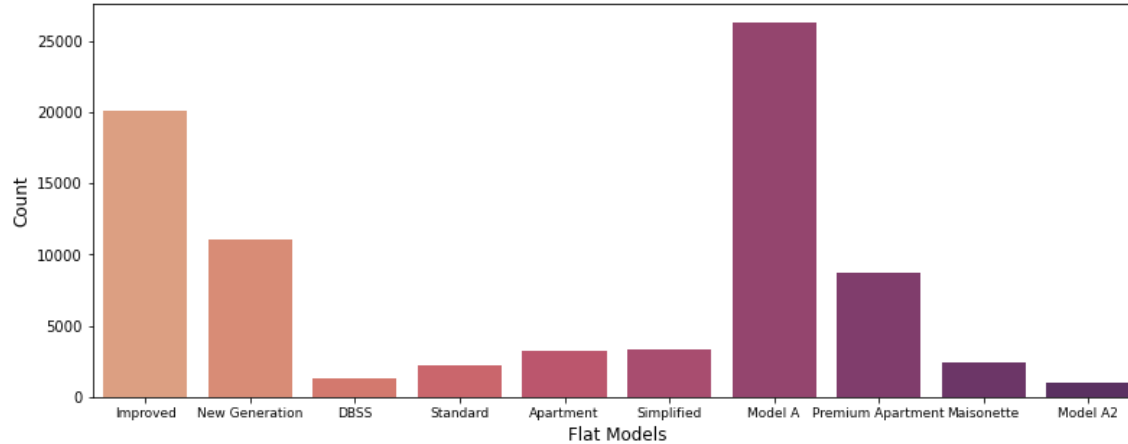
20067

03

New Generation

11061

Count of each flat model

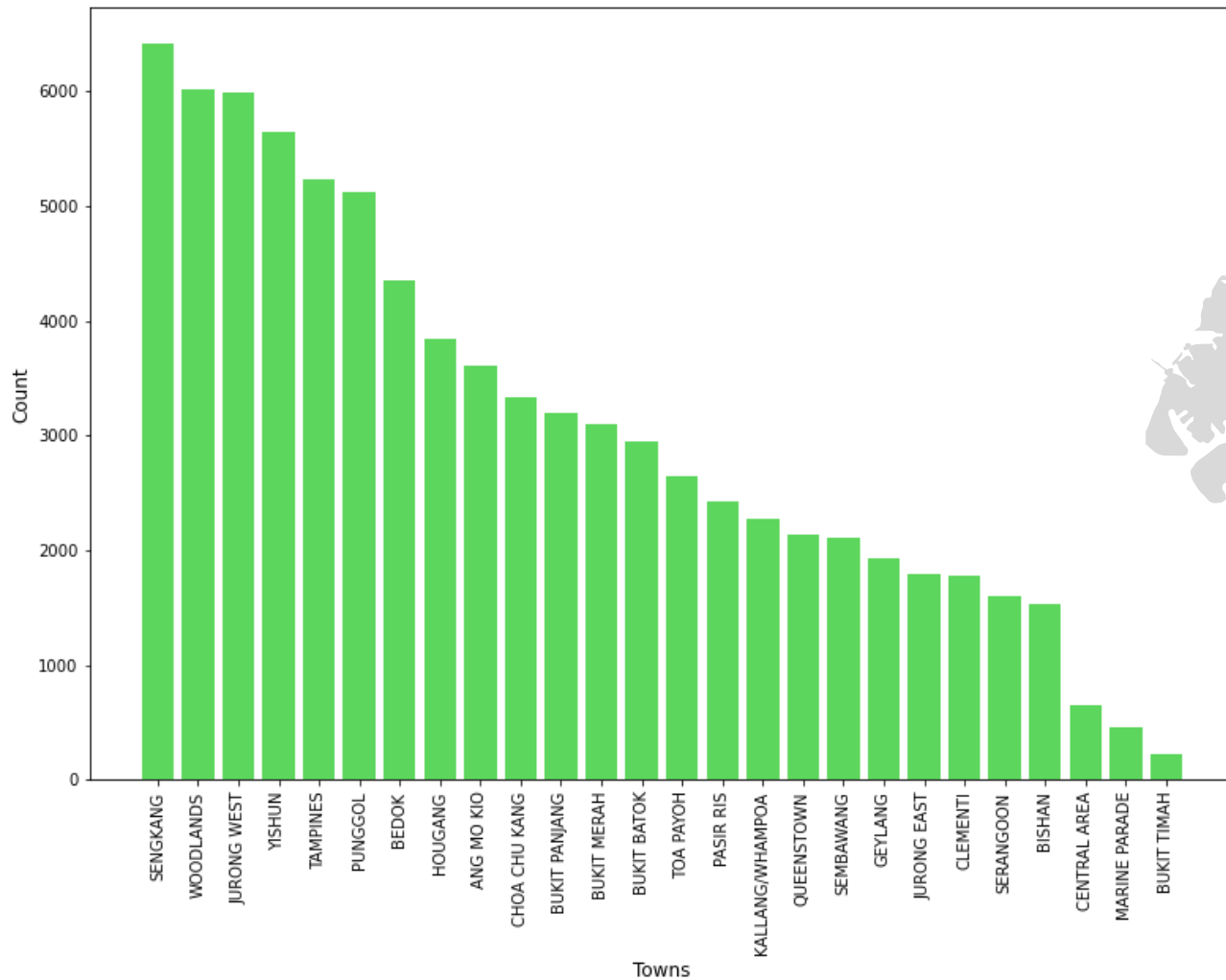


Flat Models

- **Standard:** (1/2/3/4/5-room). 1960s HDB. Had WC and shower in same room. 5-room Standard were introduced in 1974.
- **Improved:** (1/2/3/4/5-room). Introduced in 1966, the 3/4-room having separate WC and shower, they also featured void decks. 5-room Improved were introduced in 1974.
- **New Generation:** Started first in 1975, New Generation flats can be 3-Room (67 / 82 sqm) or 4-Room (92 sqm), featuring en-suite toilet for master bedroom, with pedestal type Water Closet, plus store room.
- **Model A:** Introduced in 1981: 3-Room (75 sqm), 4-Room (105 sqm), 5-Room (135 sqm), 5-Room Maisonette (139 sqm)
- **Model A2:** Smaller units of Model A. e.g., 4-Room Model A2 (90 sqm)
- **Simplified:** Introduced in 1984: 3-Room (64 sqm), 4-Room (84 sqm)
- **Multi Generation:** 3Gen flats designed to meet the needs of multi-generation families.
- **Maisonette:** AKA Model A Maisonette – 2 storeys HDB flat
- **Premium Apartment:** Introduced somewhere during 1990s, featuring better quality finishes, you get them in ready-to-move condition, with flooring, kitchen cabinets, built-in wardrobes

Flat Models

- **Executive Maisonette:** More premium version of Model A Maisonettes. These units are no longer being built after being replaced by the Executive Condominium (EC) scheme in 1995
- **Executive Apartment:** Executive Apartment / Maisonette (146-150 sqm) were introduced in 1983 and replaced 5-Room Model A flats, in addition of the 3-bedroom and separate living/dining found in 5A flats, EA and EM feature an utility/maid room. 80% of Executive units were Maisonettes and 20% were Apartments.
- **DBBS:** public apartments built under the HDB's short-lived Design, Build and Sell Scheme (DBSS) from 2005 to 2012. They are a unique (and premium) breed of HDB flats in Singapore, which are built by private developers. High Prices. Quite similar to Executive Condominium except DBBS is like a premium HDB without facilities of private condos
- **Adjoined Flat:** Large HDB flats which are combined from 2 HDB flats
- **Terrace:** HDB terrace flats built before HDB, without realizing Singapore's land constraint. Discontinued
- **Type S1S2:** apartments at The Pinnacle@Duxton are classified as "S" or Special apartments in view of its historical significance and award-winning design. For application of HDB policies, S1 and S2 apartments will be treated as 4-room and 5-room flats respectively
- **2-room:** Most likely refers to 2-room flexi where there is 1 bedroom and 1 common area

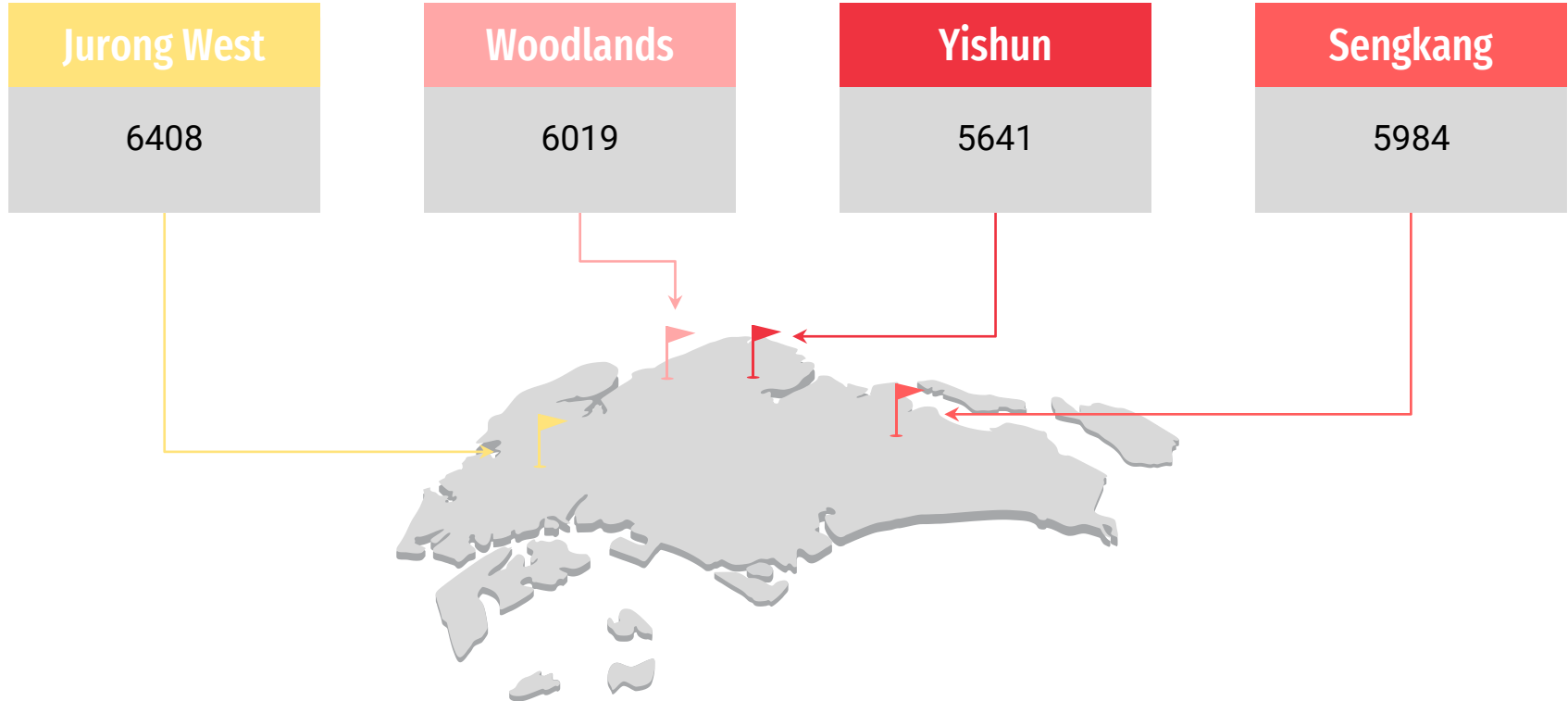


Count of flats in each town

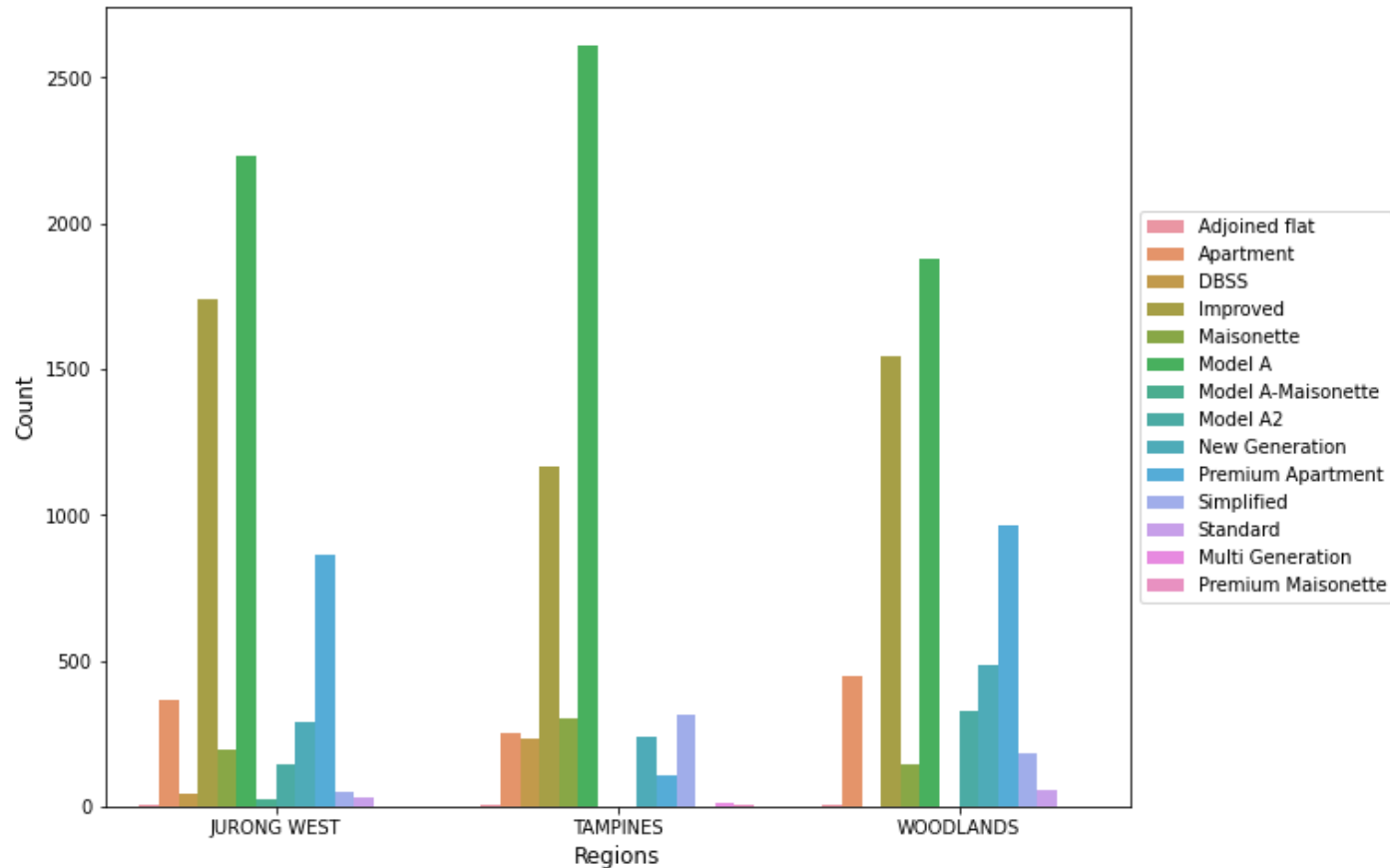


-  Central Area
-  Marine Parade
-  Bukit Timah

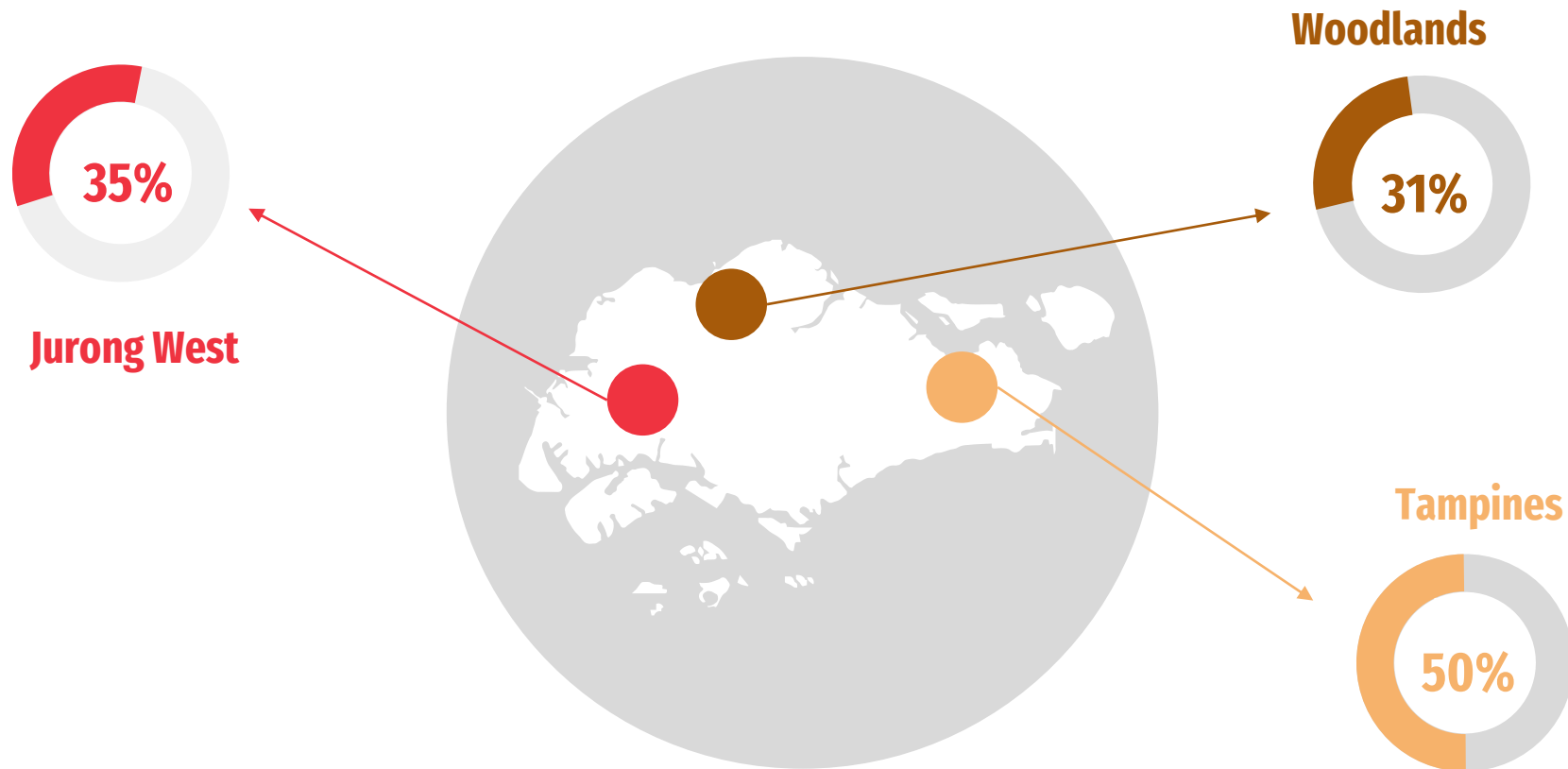
Towns with the highest count of flats



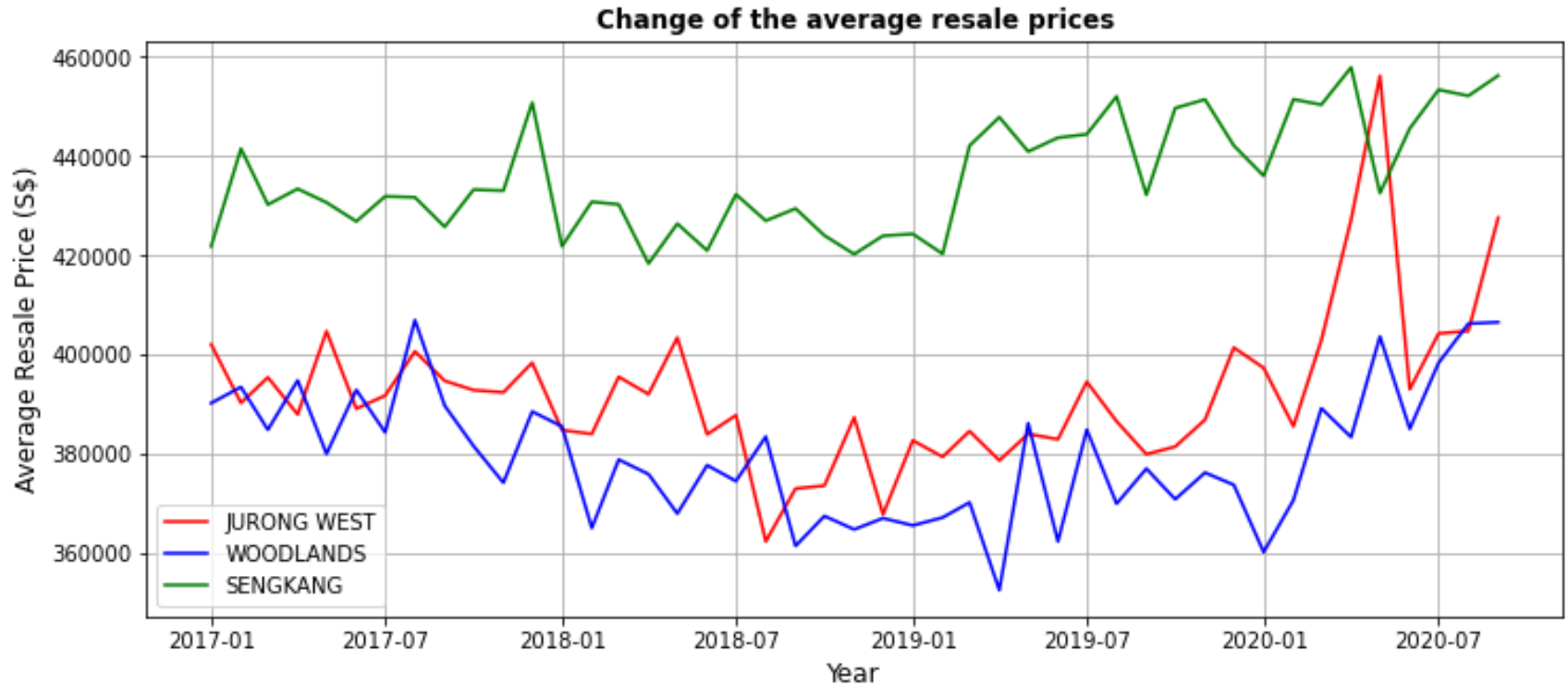
Count of flat models in Jurong West, Tampines, Woodlands



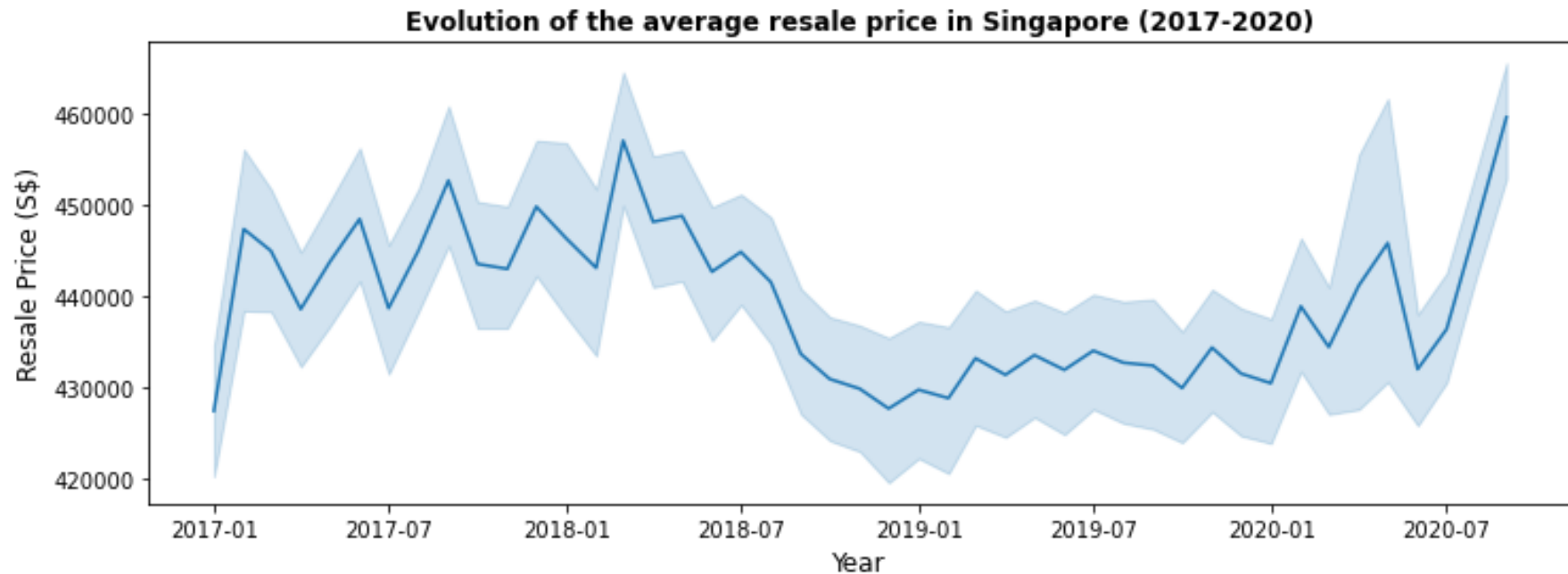
Percentage of “Model A” Flats



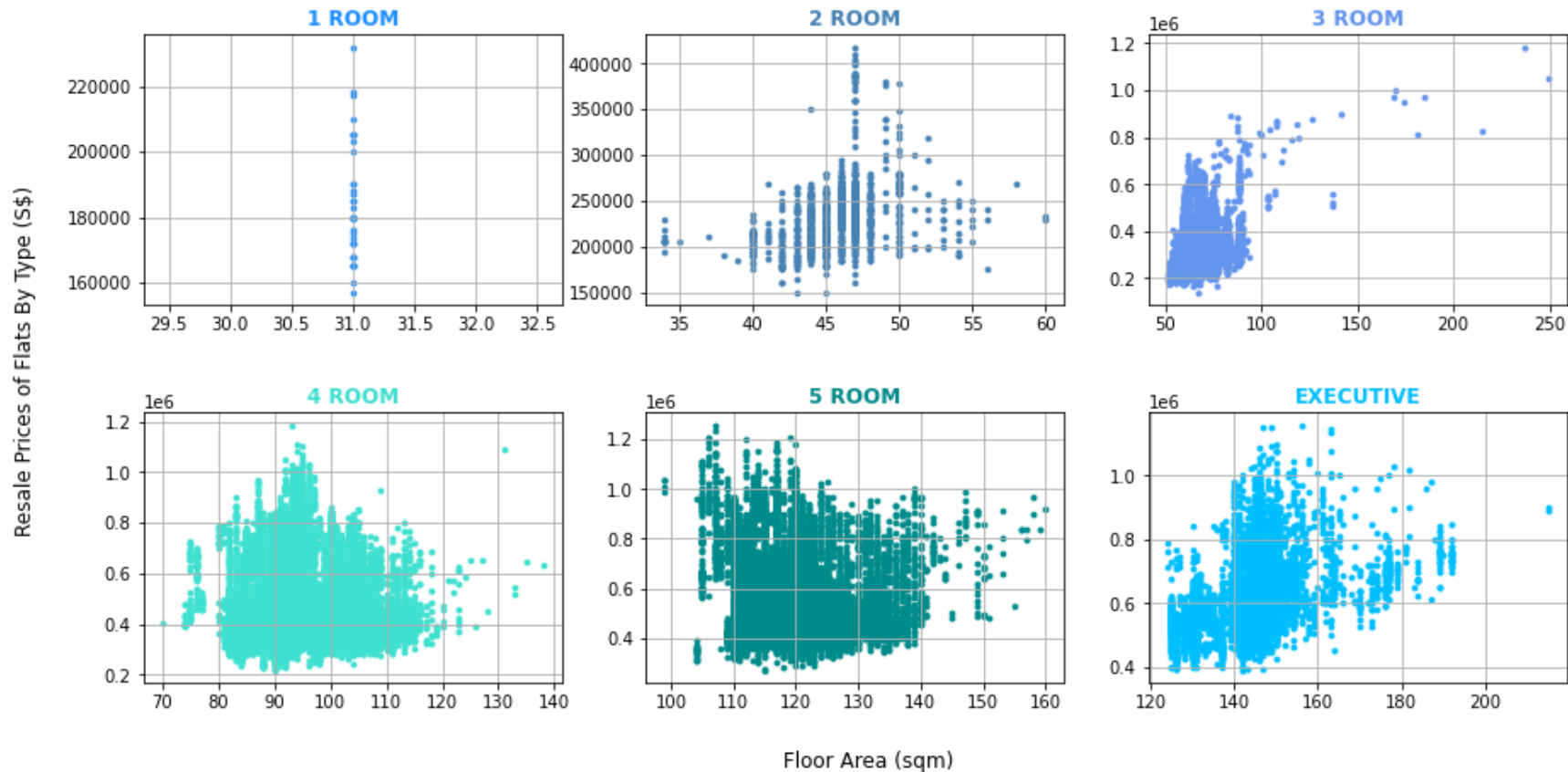
Change of the prices in Jurong West, Woodlands, Sengkang

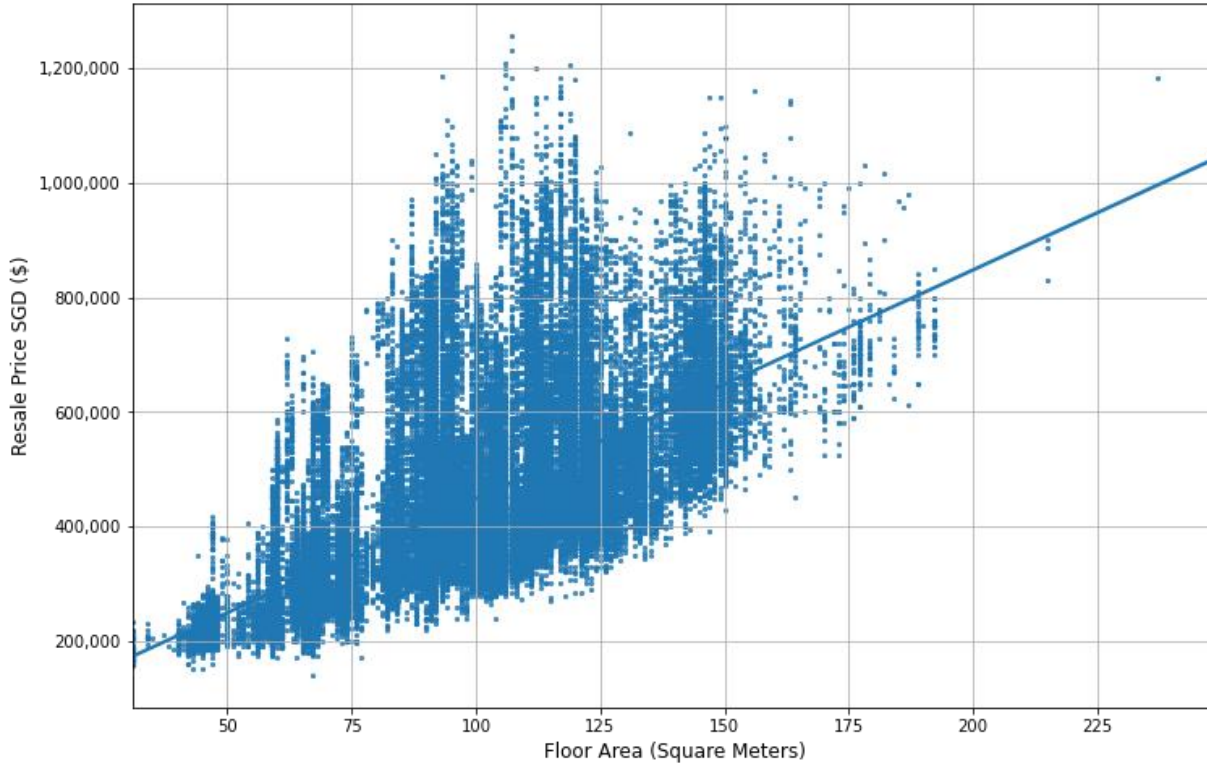


Change of the prices overall



Resale Prices at Different Floor Area By Flat Type

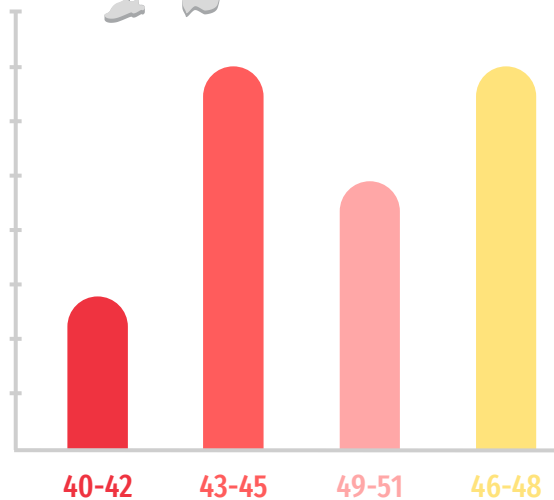
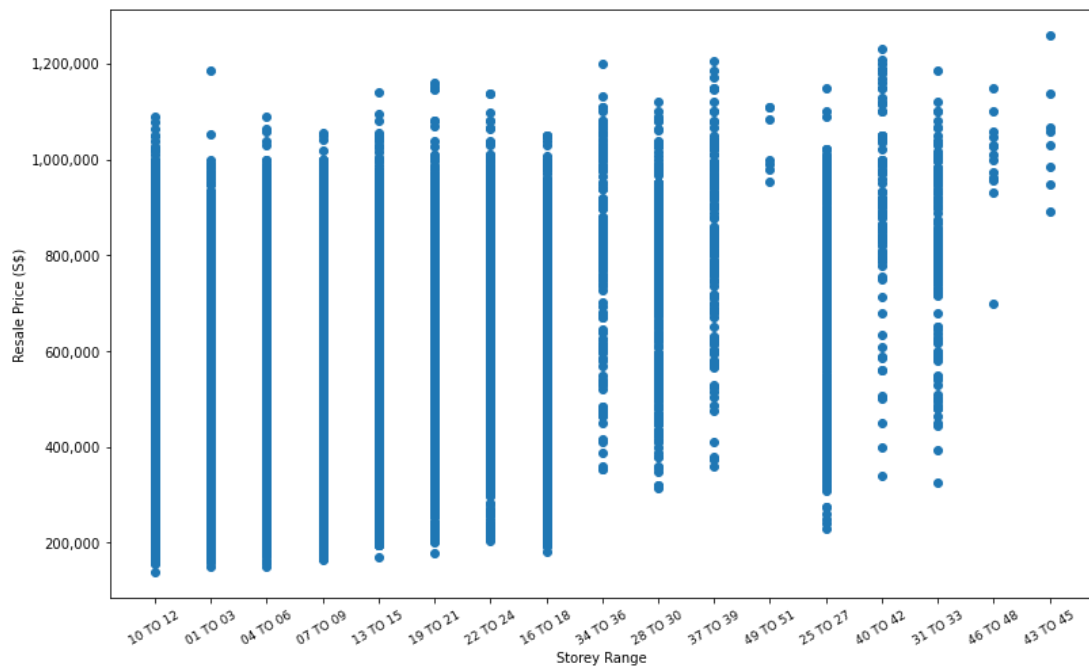




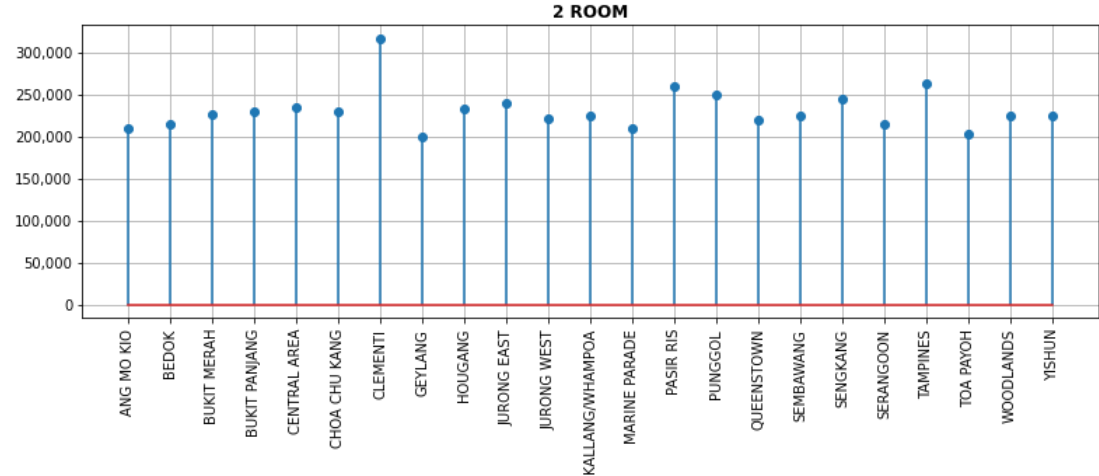
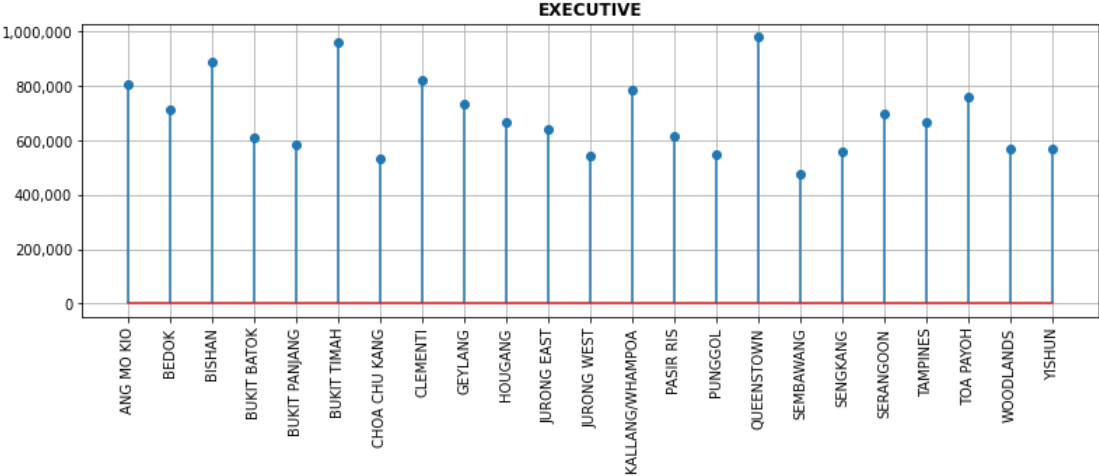
Resale Prices at Different Floor Area in all flat types

The most crowded area in this scatter plot, supposedly, is the area between 80 and 115 sqms, and area between 250,000 S\$ and 570,000 S\$.

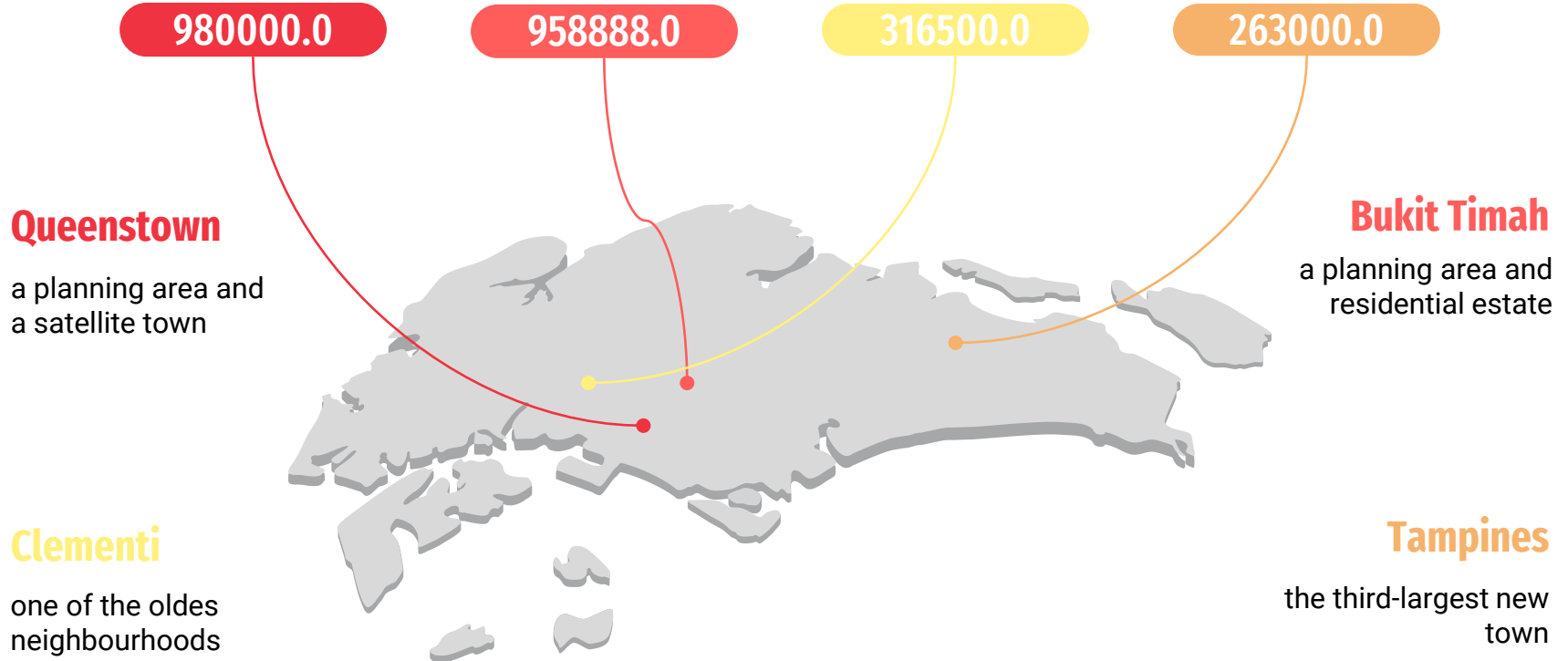
Resale Prices of flat by Storey Ranges

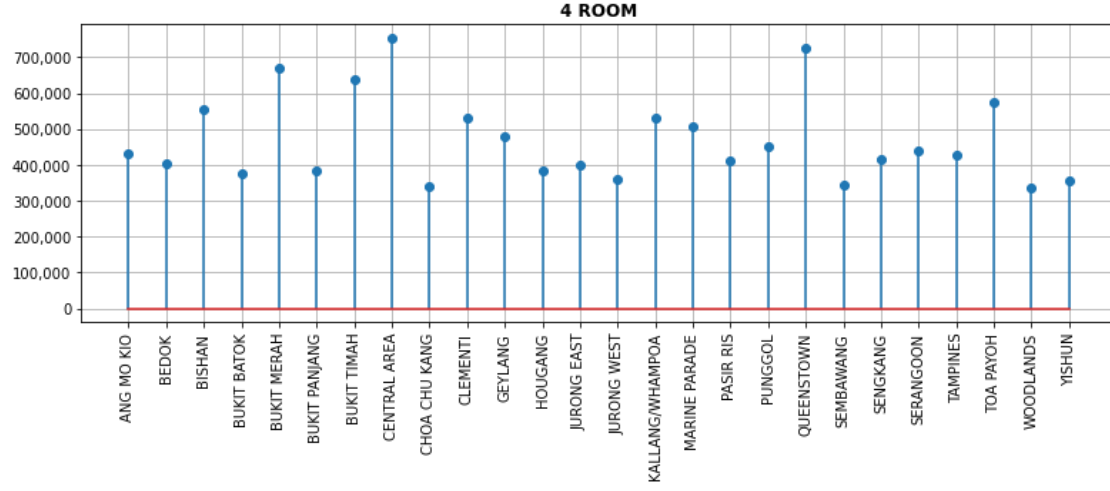
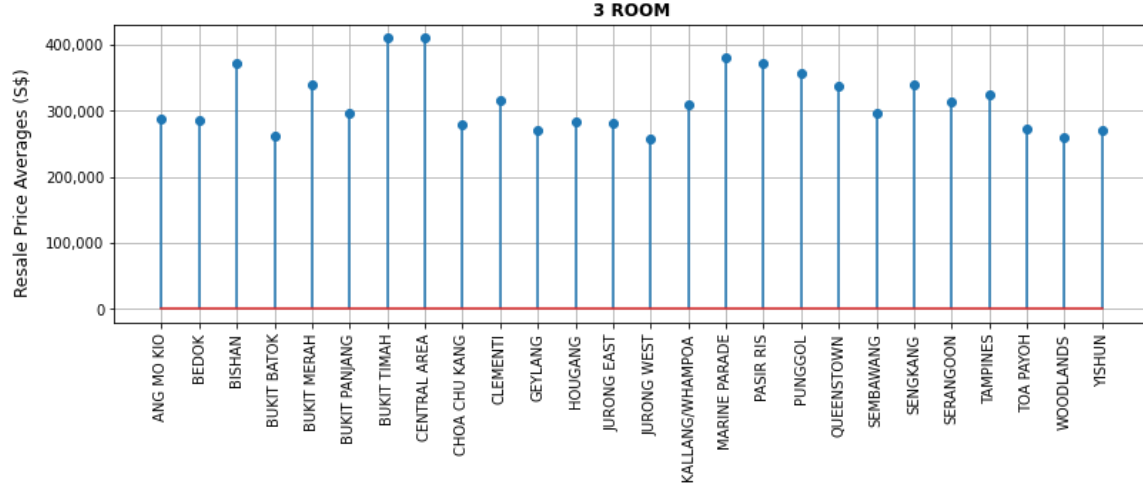


Resale Prices at Different Towns By Flat Type



Highest averages of “Executive” and “2 Room”





Highest averages of “3 Room” and “4 Room”

Queenstown

725000.0

Bukit Timah

410000.0

Central Area

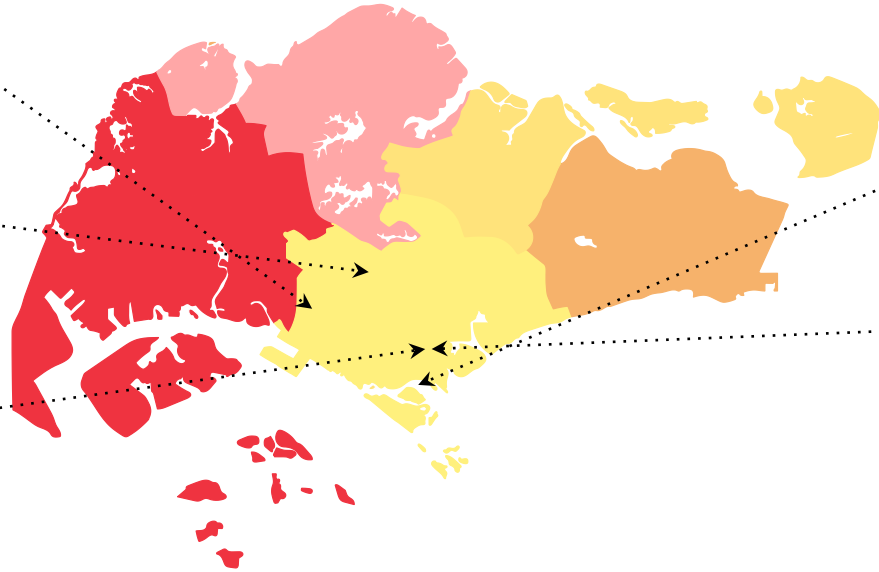
409444.0

Bukit Merah

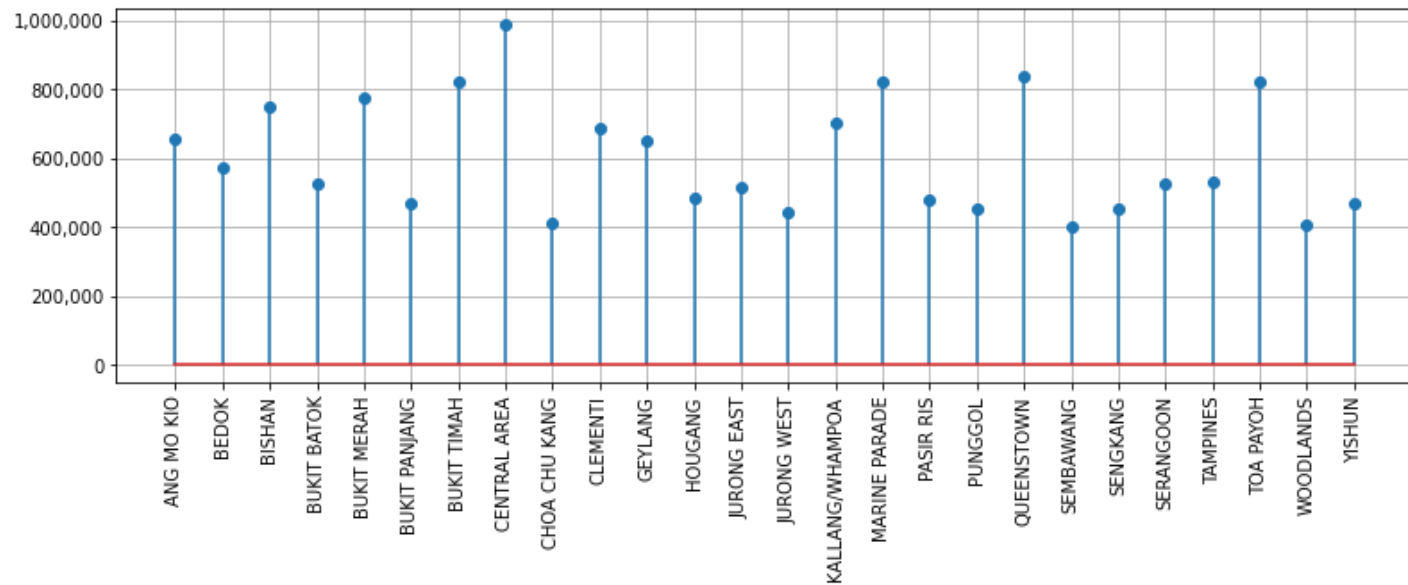
670000.0

Central Area

755000.0



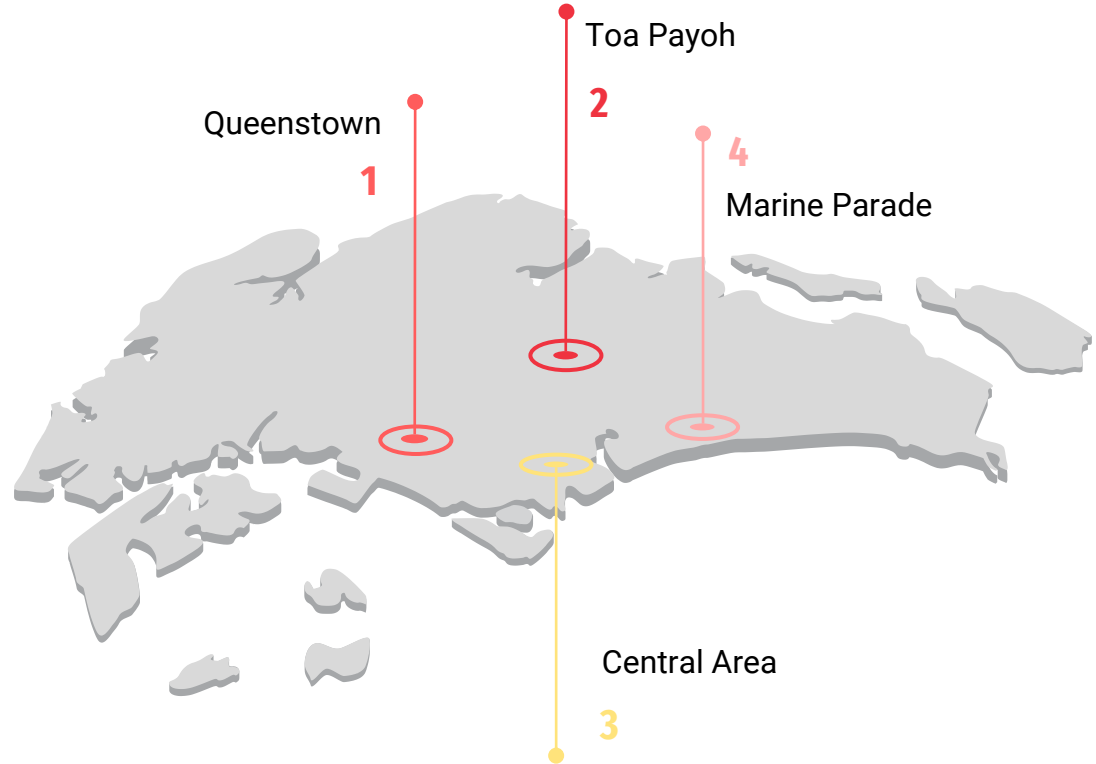
5 ROOM



Highest averages of “5 Room”



Median Price



```
df.groupby("town").filter(lambda x: len(x) > 6400)
```

	year	town	flat_type	block	street_name	storey_range	floor_area_sqm	flat_model	lease_commence_date	remaining_lease	resale_price
816	2017-01-01	SENGKANG	2 ROOM	441B	FERNVALE RD	19 TO 21	50.0	Model A	2012	94 years 02 months	273000.0
817	2017-01-01	SENGKANG	3 ROOM	441A	FERNVALE RD	10 TO 12	69.0	Model A	2012	94 years 01 month	342000.0
818	2017-01-01	SENGKANG	3 ROOM	445B	FERNVALE RD	10 TO 12	67.0	Model A	2012	94 years 10 months	345000.0
819	2017-01-01	SENGKANG	3 ROOM	445A	FERNVALE RD	13 TO 15	67.0	Model A	2012	94 years 10 months	348000.0
820	2017-01-01	SENGKANG	3 ROOM	211D	COMPASSVALE LANE	10 TO 12	68.0	Model A	2013	95 years 01 month	360000.0
...
79750	2020-09-01	SENGKANG	EXECUTIVE	225C	COMPASSVALE WALK	07 TO 09	135.0	Apartment	1999	78 years 03 months	625000.0
79751	2020-09-01	SENGKANG	EXECUTIVE	143	RIVERVALE DR	07 TO 09	135.0	Apartment	1999	78 years 03 months	575000.0
79752	2020-09-01	SENGKANG	EXECUTIVE	189A	RIVERVALE DR	16 TO 18	131.0	Apartment	2000	78 years 11 months	502000.0
79753	2020-09-01	SENGKANG	EXECUTIVE	139	RIVERVALE ST	10 TO 12	141.0	Apartment	1999	77 years 04 months	620000.0
79754	2020-09-01	SENGKANG	EXECUTIVE	122C	SENGKANG EAST WAY	01 TO 03	129.0	Apartment	2000	78 years 10 months	510000.0

Filter shows the town where the count of flats more than 6400. In our case, it is Sengkang.



Sengkang

The town is the second most populous in the region, being home to 249,370 residents in 2020.