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FILBERT KOH

# DS102/DS104 PROJECT

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# INTRO TO CHOSEN DATASET

## Dataset of Resale Flat Prices from 2017 onwards

[https://data.gov.sg/  
dataset/resale-flat-  
prices](https://data.gov.sg/dataset/resale-flat-prices)

Month	Town	Flat type	Block	Street name	Storey range	Floor area sqm (sqm)	Flat model	Lease commencement date	Remaining lease	Resale price (\$)
2022-08	ANG MO KIO	2 ROOM	314	ANG MO KIO AVE 3	04 TO 06	44	Improved	1978	54 years 06 months	275,000
2022-08	ANG MO KIO	2 ROOM	314	ANG MO KIO AVE 3	10 TO 12	44	Improved	1978	54 years 06 months	255,000
2022-08	ANG MO KIO	2 ROOM	116	ANG MO KIO AVE 4	01 TO 03	44	Improved	1978	54 years 10 months	218,888
2022-08	ANG MO KIO	2 ROOM	170	ANG MO KIO AVE 4	04 TO 06	45	Improved	1986	62 years 06 months	286,000
2022-08	ANG MO KIO	3 ROOM	331	ANG MO KIO AVE 1	07 TO 09	68	New Generation	1981	57 years 06 months	350,000
2022-08	ANG MO KIO	3 ROOM	308A	ANG MO KIO AVE 1	13 TO 15	70	Model A	2012	89 years 02 months	565,000
2022-08	ANG MO KIO	3 ROOM	320	ANG MO KIO AVE 1	10 TO 12	73	New Generation	1977	53 years 10 months	395,000
2022-08	ANG MO KIO	3 ROOM	223	ANG MO KIO AVE 1	07 TO 09	67	New Generation	1978	54 years 06 months	320,000
2022-08	ANG MO	3 ROOM	320	ANG MO	07 TO 09	73	New	1977	53 years 10	407,000

# **DATASET DESCRIPTION**

- Dataset keeps records of transacted prices of resale flats from Jan 2017 onwards
- Based on date of registration of transaction
- 134168 rows, 11 columns

# ATTRIBUTE DESCRIPTION

- Month: Year and month in yyyy-mm of transaction registration
- Town: Town name (e.g. Ang Mo Kio, Bedok etc.)
- Flat type: Size/type of flat (2-room, 5-room, Executive etc.)
- Block: Block Number of unit transacted
- Street name: Street which the block is located on
- Storey Range: Approximate level of transacted unit
- Floor Area sqm (sqm): Size of unit in square metres
- Flat model: Model/type of flat (Maisonette, DBSS etc.)
- Lease Commence Date: Year when lease of unit started
- Remaining Lease: Time left till end of lease
- Resale Price: Price transacted

# GOALS OF ANALYSIS

- Are more resale flats being transacted? What possible reasons could explain the trend found?
- What are the average transacted prices of the different flat types in the different towns?
- Which locations/towns are the most desirable and valuable?
- Is there a correlation between floor area and price transacted?
- How is the relationship between resale price and remaining lease like?
- How has the prices of resale flats changed since 2017?
- What buying advice to give a friend who is looking to buy a 4-room flat in the west of Singapore? (i.e. what amount should he/she be expected to budget for?)



# **DATASET CLEANING**

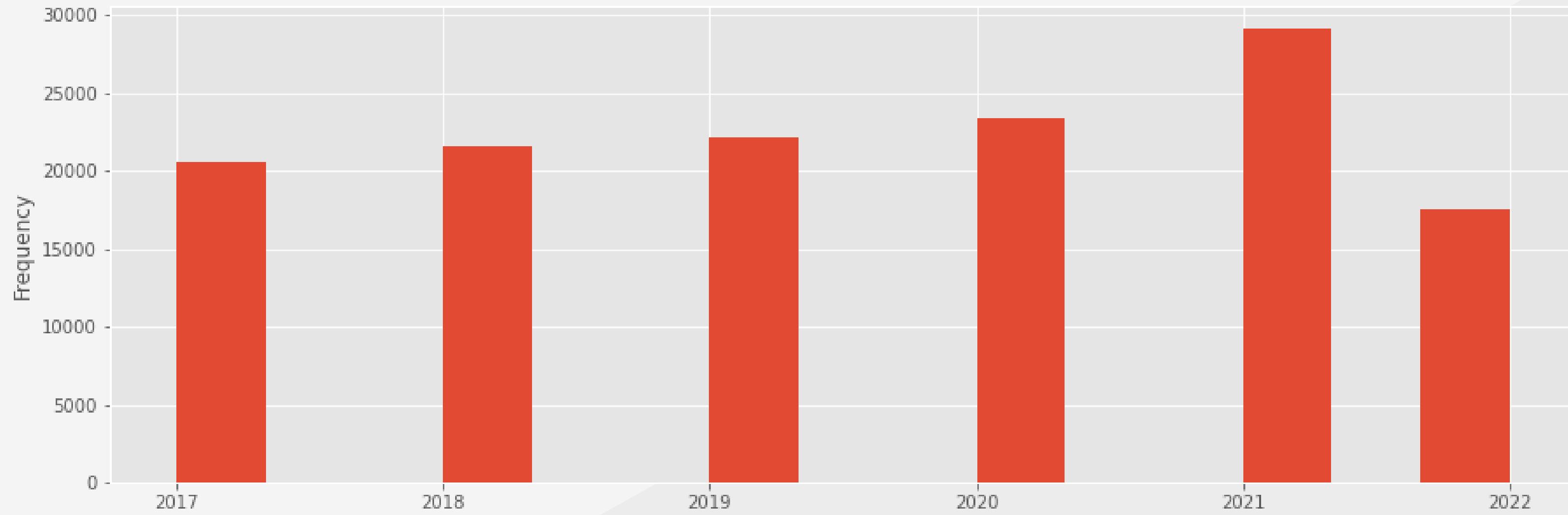
- No missing values
- Small proportion of duplicated rows (0.19%)
- Duplicated rows will be kept as valid transactions

# **DATA ANALYSIS**

**Are more resale flats  
being transacted since  
2017?**

## **Are more resale flats being transacted since 2017?**

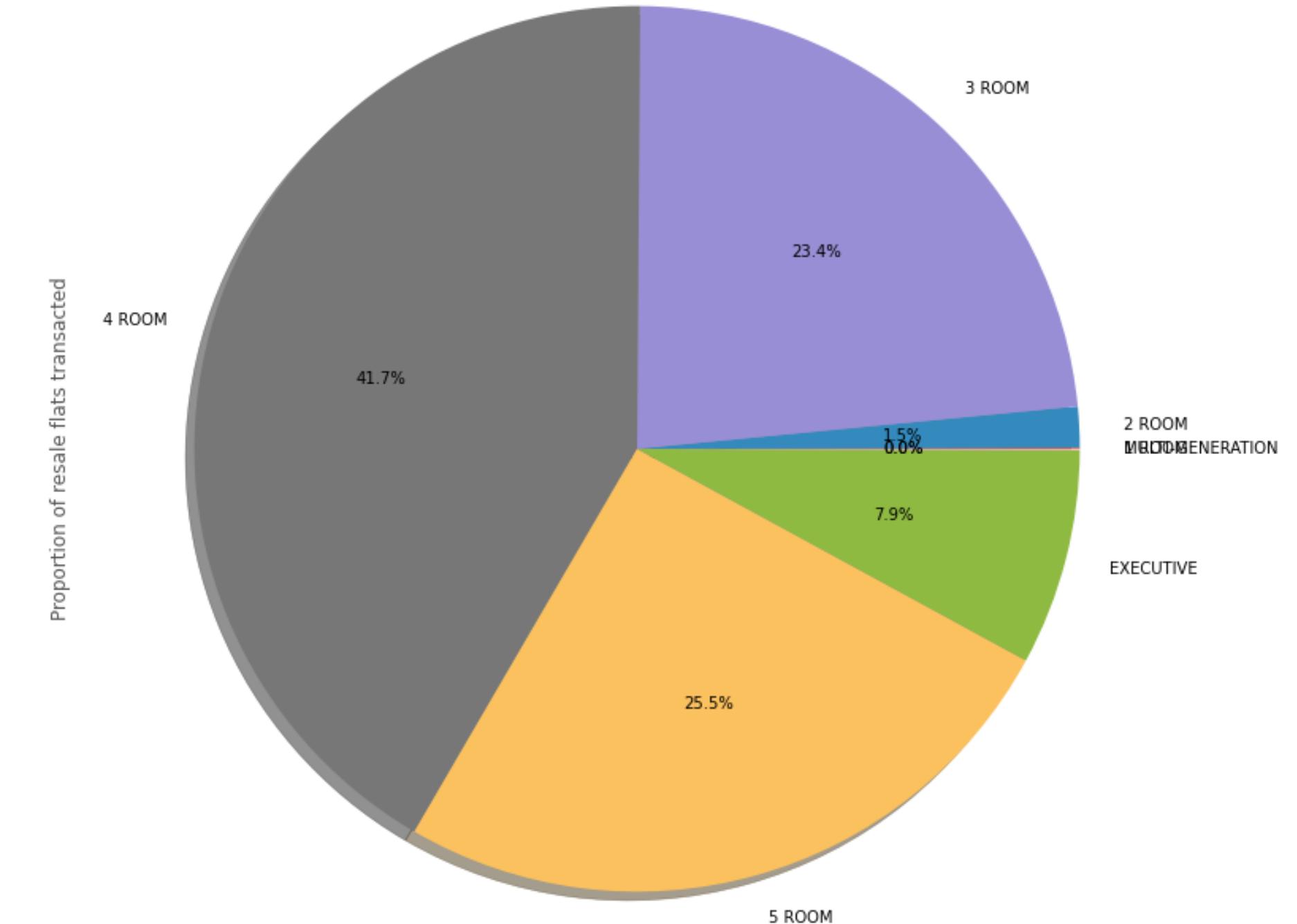
Number of resale flat transactions from 2017-2022



- Short Answer: Yes!
- Gradual increase from 2017-2020
- Sudden spike in 2021 ?

## Are more resale flats being transacted since 2017?

- 4-room resale make up greatest proportion
- Almost equal proportion of 3-room & 5-room
- Negligible 1-room & multigeneration flats



**Are more resale flats being transacted since 2017?**

## **Why the sudden spike in 2021?**

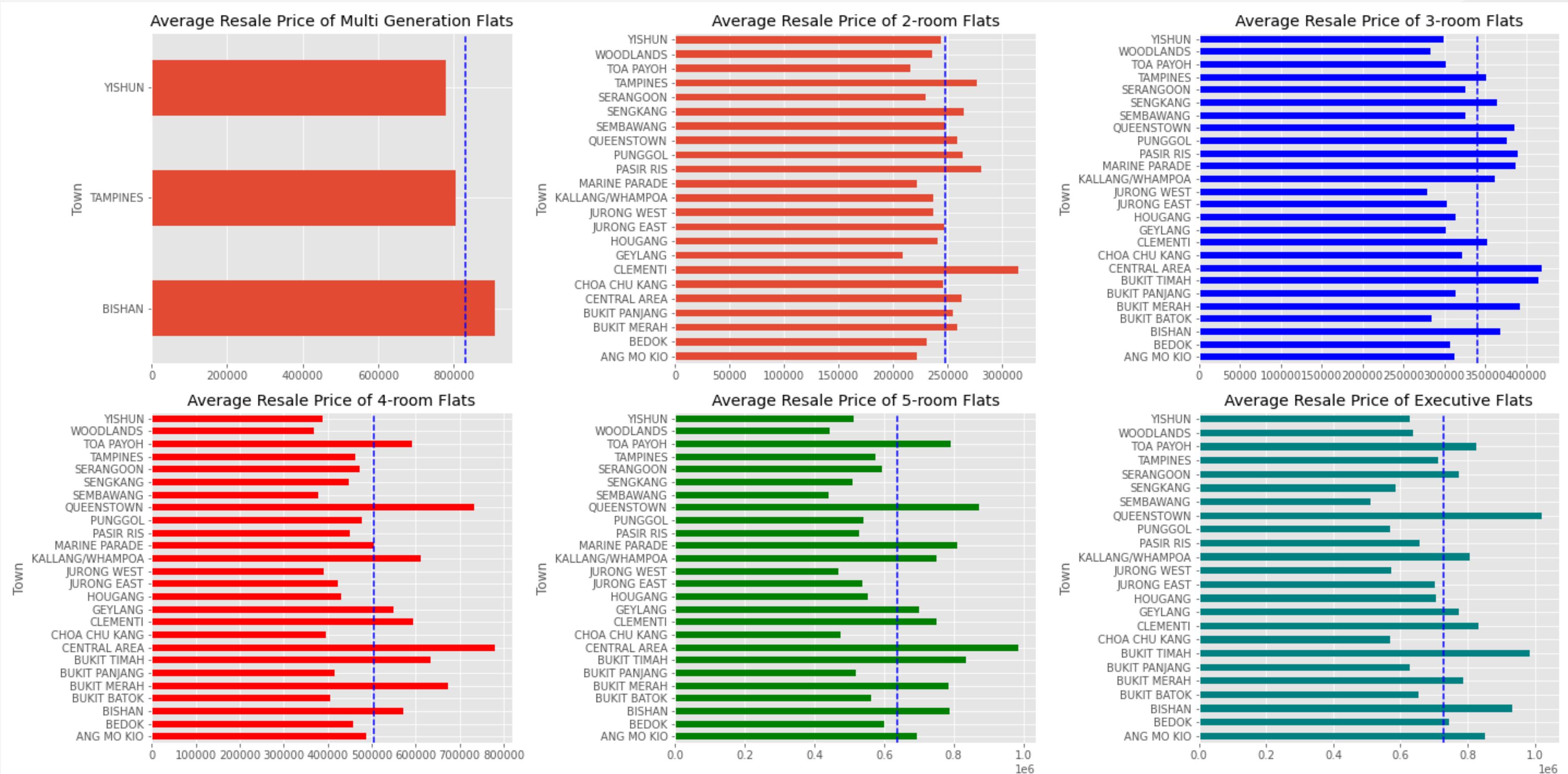
- Downgrades from private housing to HDB
- Oversubscription of BTOs
- BTO construction delays
- Stimulus packages during COVID

Credits to: <https://financeguru.sg/hdb-resale-spike-home-loan-singapore/>

# **DATA ANALYSIS**

**What are the average  
transacted prices of the  
different flat types in the  
different towns?**

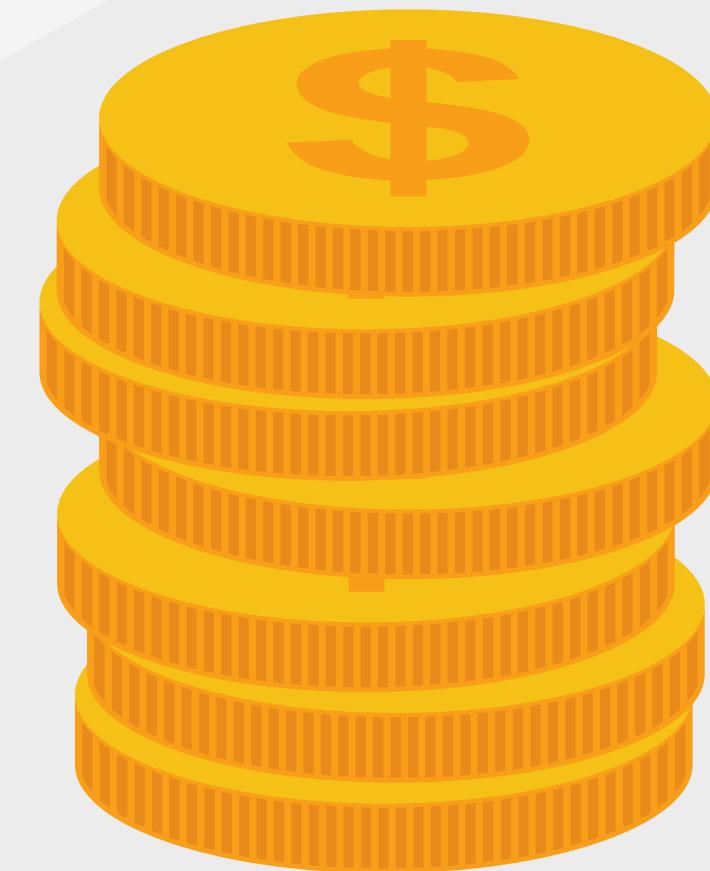
# What are the average transacted prices of the different flat types in the different towns?



**What are the average transacted prices of the different flat types in the different towns?**

## **Average prices for different flat types:**

- 1-room flat (no plot): \$~193k
- 2-room flat: ~\$248k
- 3-room flat: ~\$340k
- 4-room flat: ~\$500k
- 5-room flat: ~\$640k
- Executive flats: ~\$727k
- Multigeneration flats: ~\$830k

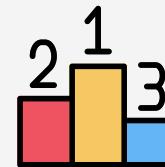


# **DATA ANALYSIS**

**which locations/towns  
are the most desirable and  
valuable?**

**Which locations/towns are the most desirable and valuable?**

## **Top 5 Leaderboard**



### **2-room Flats**

1. Clementi
2. Pasir Ris
3. Tampines
4. Sengkang
5. Punggol

### **3-room Flats**

1. Central
2. Bukit Timah
3. Bukit Merah
4. Pasir Ris
5. Queenstown

### **4-room Flats**

1. Central
2. Queenstown
3. Bukit Merah
4. Bukit Timah
5. Kallang/Whampoa

### **5-room Flats**

1. Central
2. Queenstown
3. Bukit Timah
4. Marine Parade
5. Toa Payoh

### **Executive Flats**

1. Queenstown
2. Bukit Timah
3. Bishan
4. Bedok
5. Toa Payoh

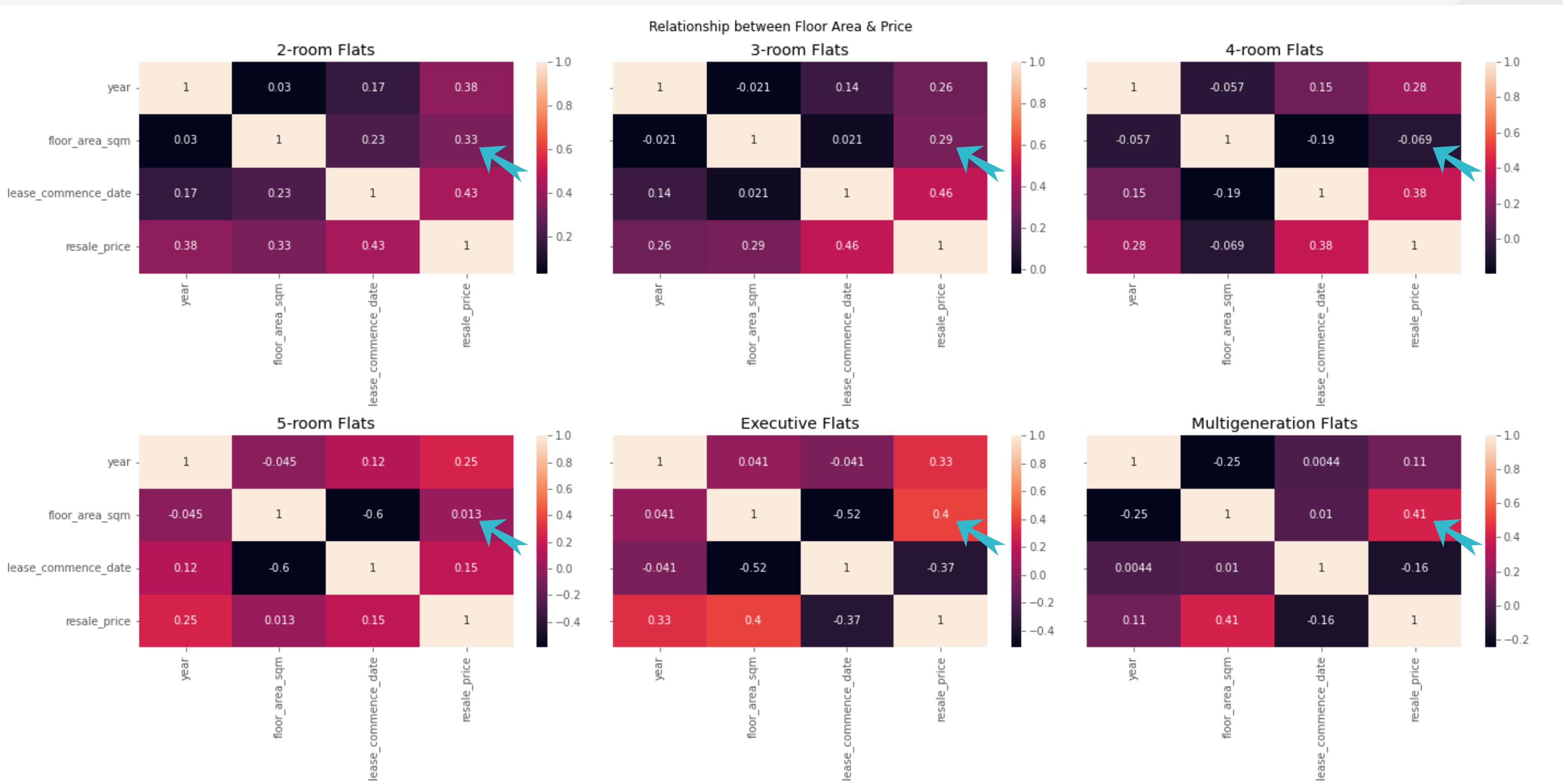
### **Multigeneration Flats**

Bishan is most valuable  
location

# **DATA ANALYSIS**

**Is there a correlation  
between floor area and  
price transacted?**

# Is there a correlation between floor area and price transacted?



## **Is there a correlation between floor area and price transacted?**

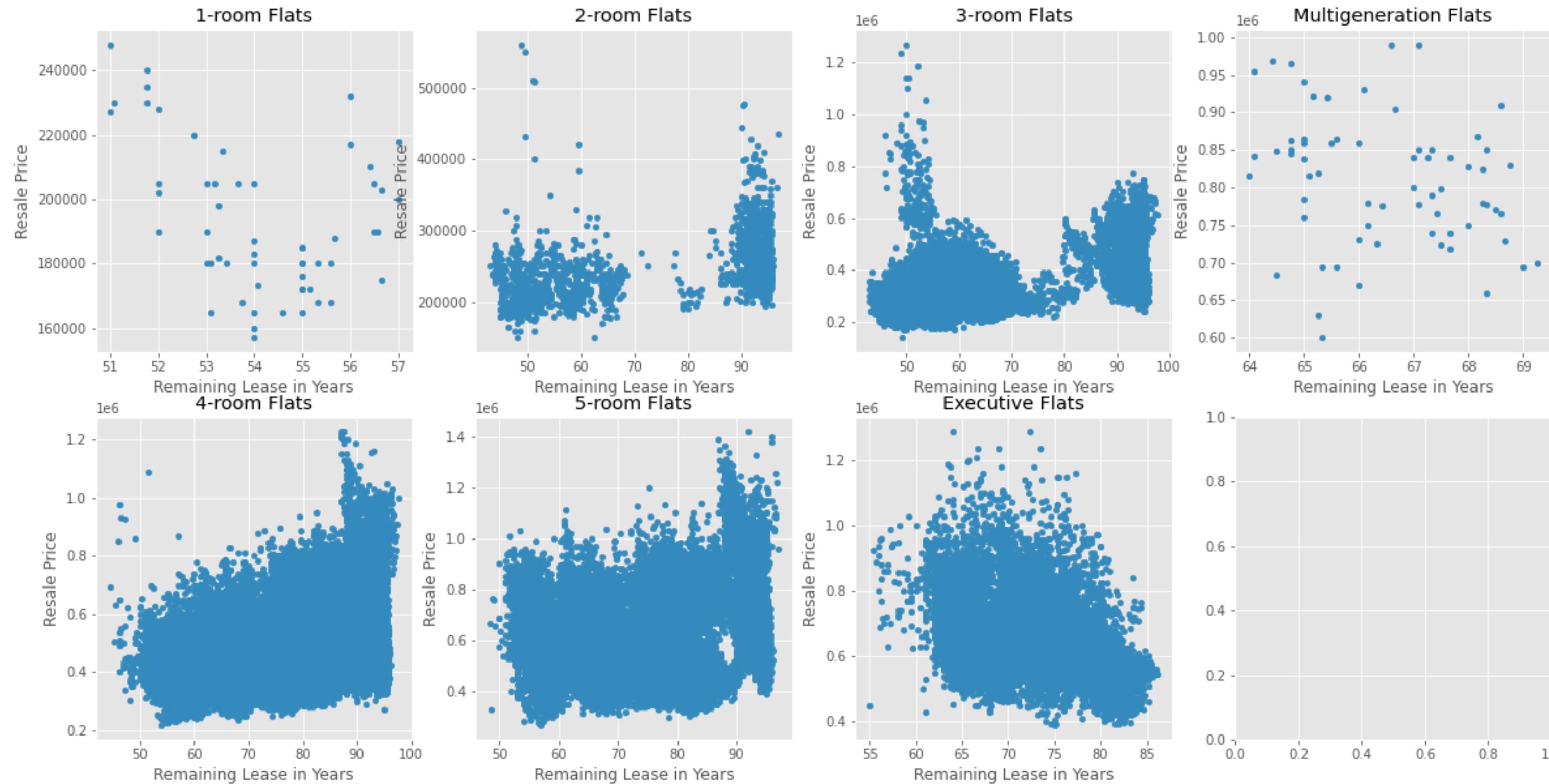
- 1-room flat: No plot, all flats transacted are of same size
- 2-room flat: Correlation of 0.3, mild positive
- 3-room flat: Correlation of 0.29, mild positive
- 4-room flat: Correlation of -0.069, very weakly negative
- 5-room flat: Correlation of 0.013, very weakly positive
- Executive flats: Correlation of 0.4, mild positive
- Multigeneration flats: Correlation of 0.41, mild positive

# **DATA ANALYSIS**

**How is the relationship  
between resale price and  
remaining lease like?**

# How is the relationship between resale price and remaining lease like?

Relationship between length of Remaining Lease & Resale Price



## **How is the relationship between resale price and remaining lease like?**

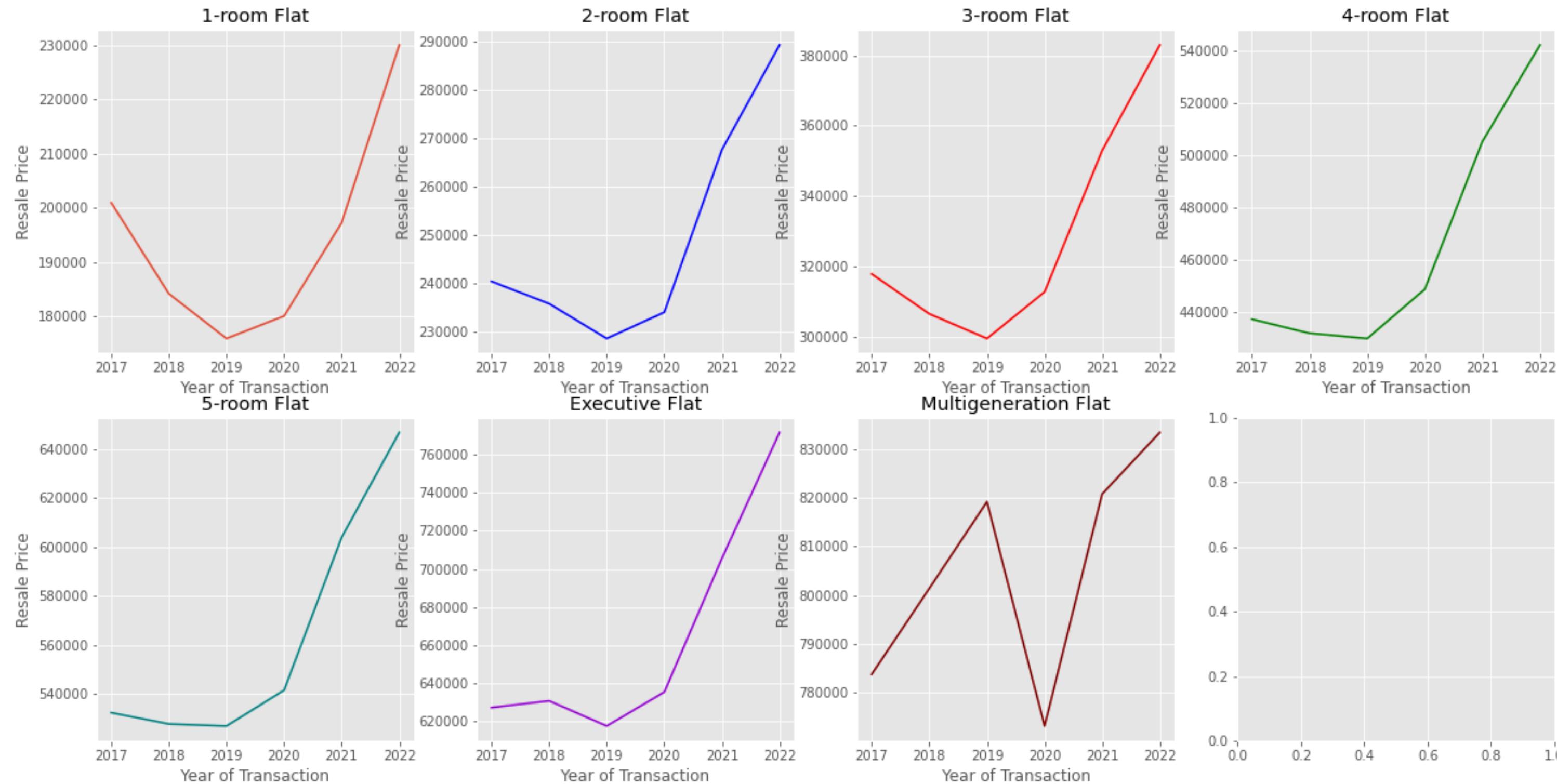
- 1-room flat: No obvious relationship
- 2-room flat: Generally, newer flats command slightly higher prices
- 3-room flat: Older flats more likely to command higher prices. In general, not much difference in price.
- 4-room flat: Newer flats more likely to command higher prices.
- 5-room flat: Newer flats more likely to command higher prices
- Executive flats: Older flats generally command higher prices
- Multigeneration flats: No obvious relationship

# **DATA ANALYSIS**

**How has the prices of  
resale flats changed since  
2017?**

# How has the prices of resale flats changed since 2017?

Resale Price Trend for different flat types from 2017-2022



## **How has the prices of resale flats changed since 2017?**

- Surge in prices from 2020 onwards for all flat types
- Slight dip in prices in 2019 for all flat types, except multigeneration
- Dip in multigeneration flat prices in 2020

# **DATA ANALYSIS**

**What buying advice to give a friend  
who is looking to buy a 4-room flat  
in the west of Singapore?**

## What buying advice to give a friend who is looking to buy a 4-room flat in the west of Singapore?

- Budget around \$440k to purchase
- Rule out Clementi as a location unless willing to stretch budget or must stay in Clementi
- Look at Jurong West area if on a tight budget; more likely to find cheaper prices

	town	flat_type	
1	BUKIT BATOK	3 ROOM	312694.113086
3		4 ROOM	436668.313776
4		5 ROOM	605221.308571
5		EXECUTIVE	681663.015625
6	BUKIT PANJANG	2 ROOM	264609.797101
7		3 ROOM	330923.401734
8		4 ROOM	441512.943691
9		5 ROOM	552082.920817
10		EXECUTIVE	661861.214891
11	CHOA CHU KANG	2 ROOM	252805.405405
12		3 ROOM	350413.863117
13		4 ROOM	437067.756158
14		5 ROOM	519779.637255
15		EXECUTIVE	608507.954693
16	CLEMENTI	2 ROOM	330875.764706
17		3 ROOM	373990.323810
18		4 ROOM	621814.208138
19		5 ROOM	781103.346939
20		EXECUTIVE	833212.072727
21	JURONG EAST	2 ROOM	261142.809524
22		3 ROOM	323554.368298
23		4 ROOM	436097.671362
24		5 ROOM	546847.667622
25		EXECUTIVE	723899.280702
26	JURONG WEST	2 ROOM	255022.727273
27		3 ROOM	308132.648906
28		4 ROOM	426570.342837
29		5 ROOM	499682.929352
30		EXECUTIVE	599480.867617
31	Name: resale_price, dtype: float64		



# THANK YOU

