

Make the most of your money: **'Hacking'** Housing Prices

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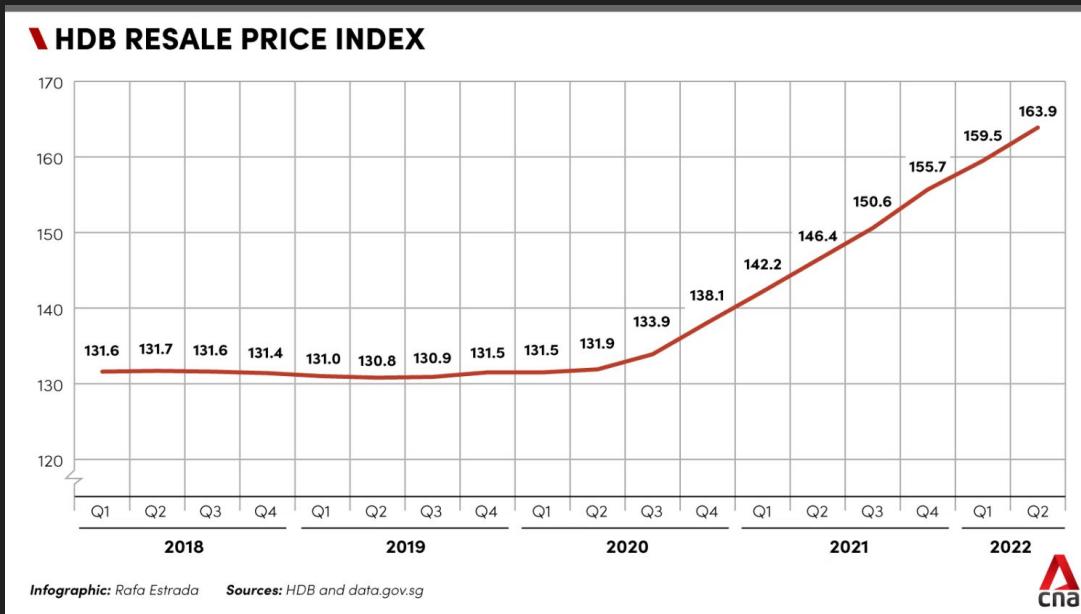


01

Introduction & Workflow



Increasing trend of resale prices

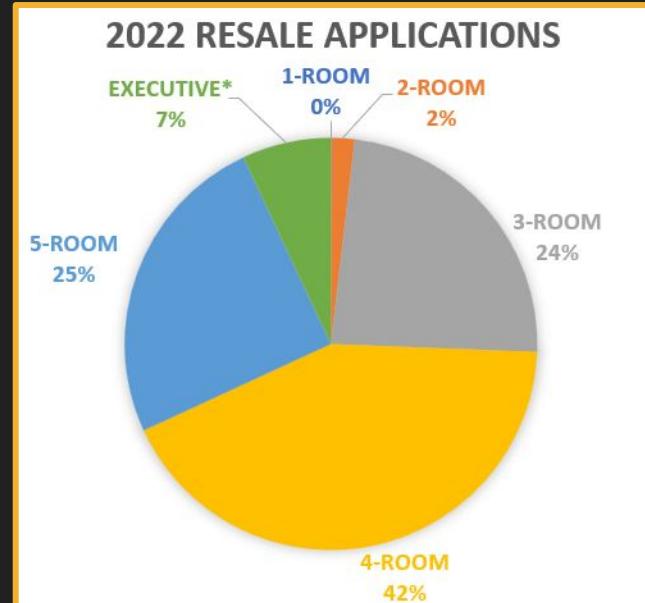


Resale prices increased 2.8% quarterly on average since 2020

Source: CNA and HDB

Drivers for resale flats demand

- Lesser waiting time
- More spacious
- Closer to parents home
- Lesser renovation cost
- Increased CPF grant for families buying 4 or 5 Room flats
- More amenities



Source: HDB

Problem statement

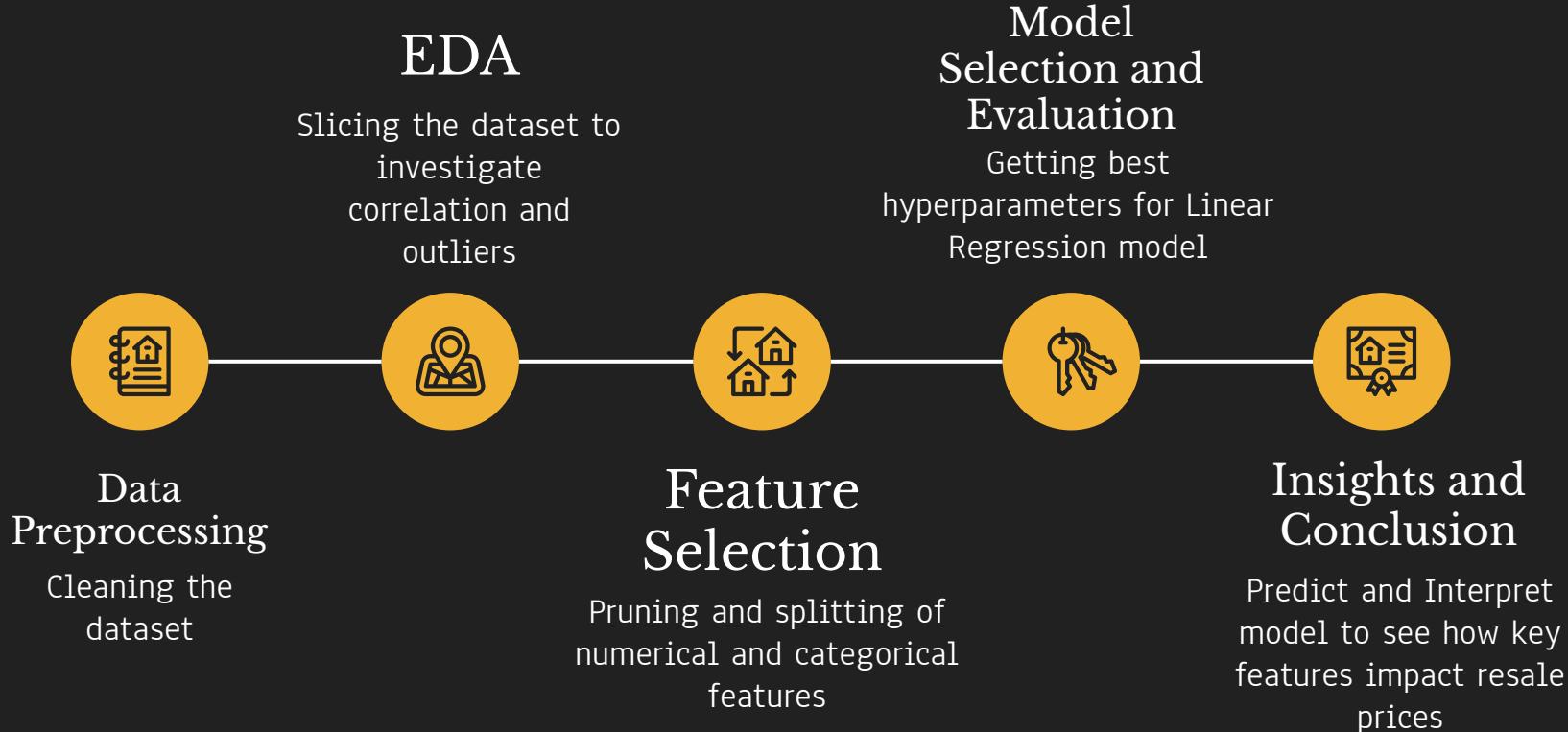
Analyse key features impacting Singapore HDB resale prices to help buyers estimate budget, and help sellers gauge flat's value to see if the prices quoted are reasonable.



Our scope

	Objective	Limitations	Assumption
Prospective Buyer	Predict budget for buying a flat of choice	Different buyer's needs may not be catered in a generalised model	Model is robust enough to keep buyer specific or macroeconomic variables within the error margin
Property owner	Estimate property value	Economic and infrastructure changes with time is not included	

Our workflow



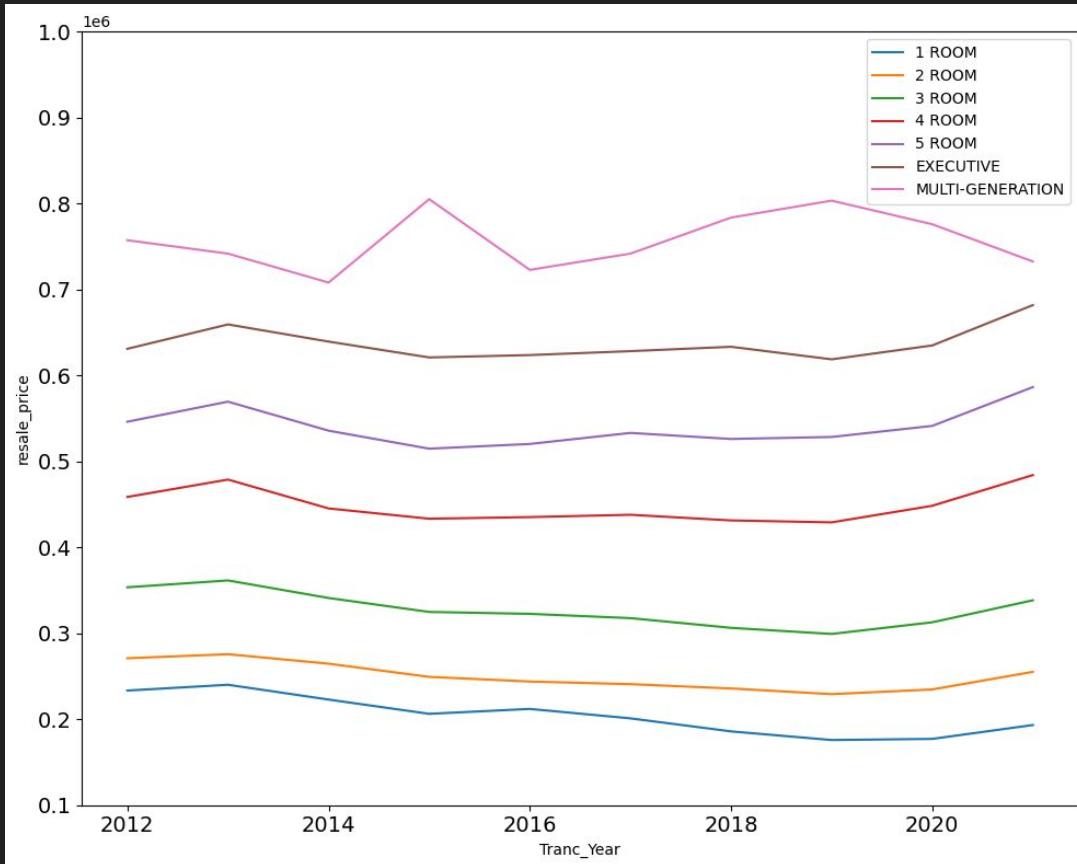


02



Analysis

Average Resale Price Yearly Basis



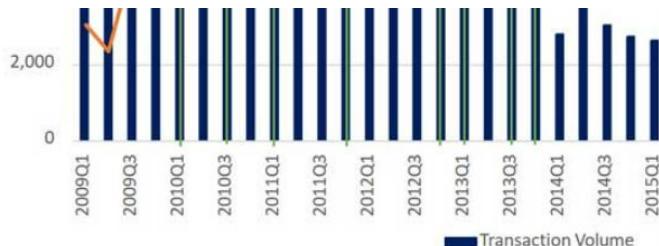
- Price ↑ as Room ↑
- Constant for Bigger Rooms 2013 onwards
- Slight Decrease for Smaller Rooms 2013 onwards

“HELL FREEZES OVER!!

History of Cooling Measures



Total debt servicing ratio (TDSR) refers to the portion of a borrower's gross monthly income that goes towards repaying the monthly debt obligations, including the loan being applied for. A borrower's TDSR should be less than or equal to 55%.



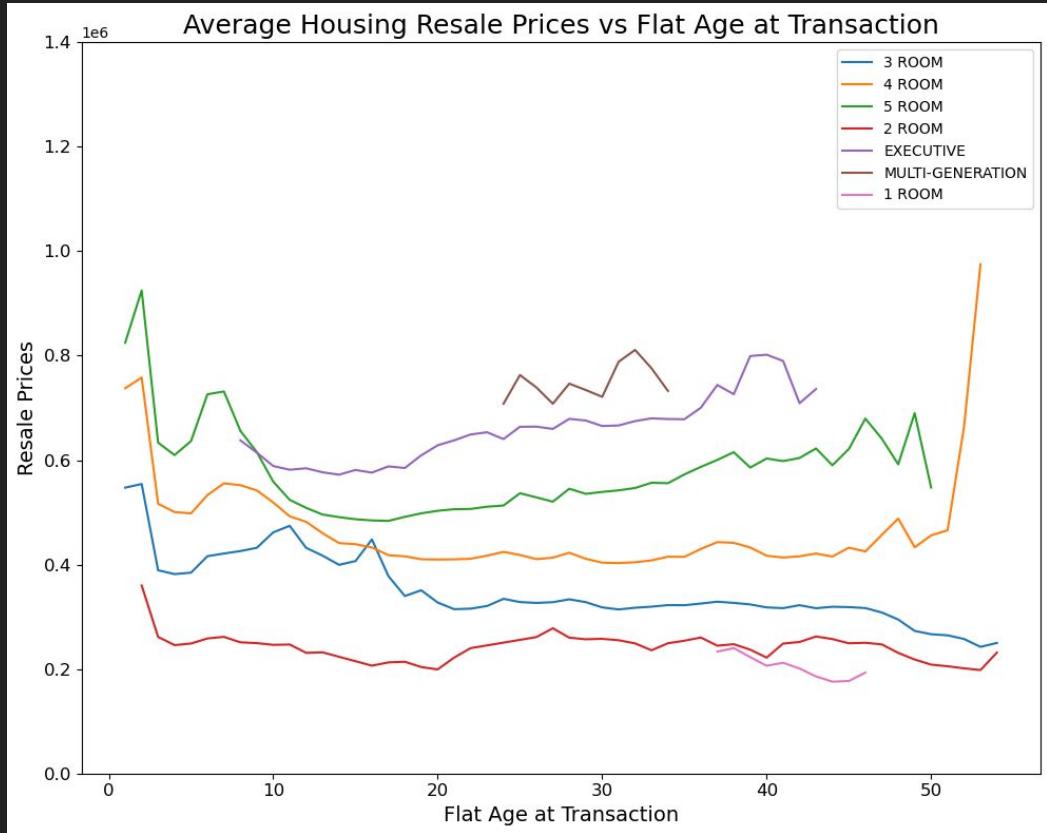
Source: URA, Huttons Research

Jun 2013

MAS's new debt servicing framework stipulates the minimum standards of how financial institutions calculate the Total Debt Servicing Ratio (TDSR) and plugs loopholes that existed previously.

- Reduction in the Debt Servicing Ratio to 30%.
- PRs who own a HDB flat are disallowed from subletting their whole flat.
- PRs who own a HDB flat must sell their flat within six months of purchasing a private residential property.

HDB Age

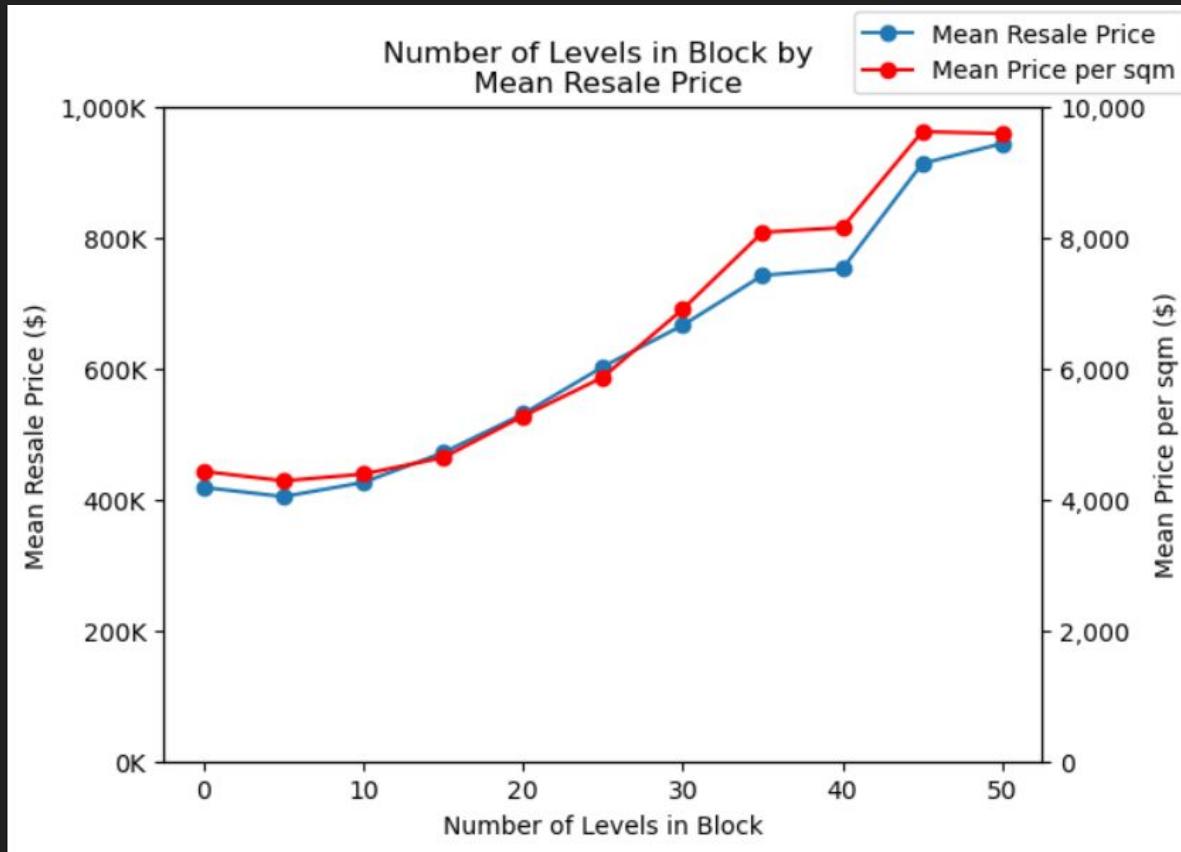


- Price ↑ as Age ↓
- MOP Effect

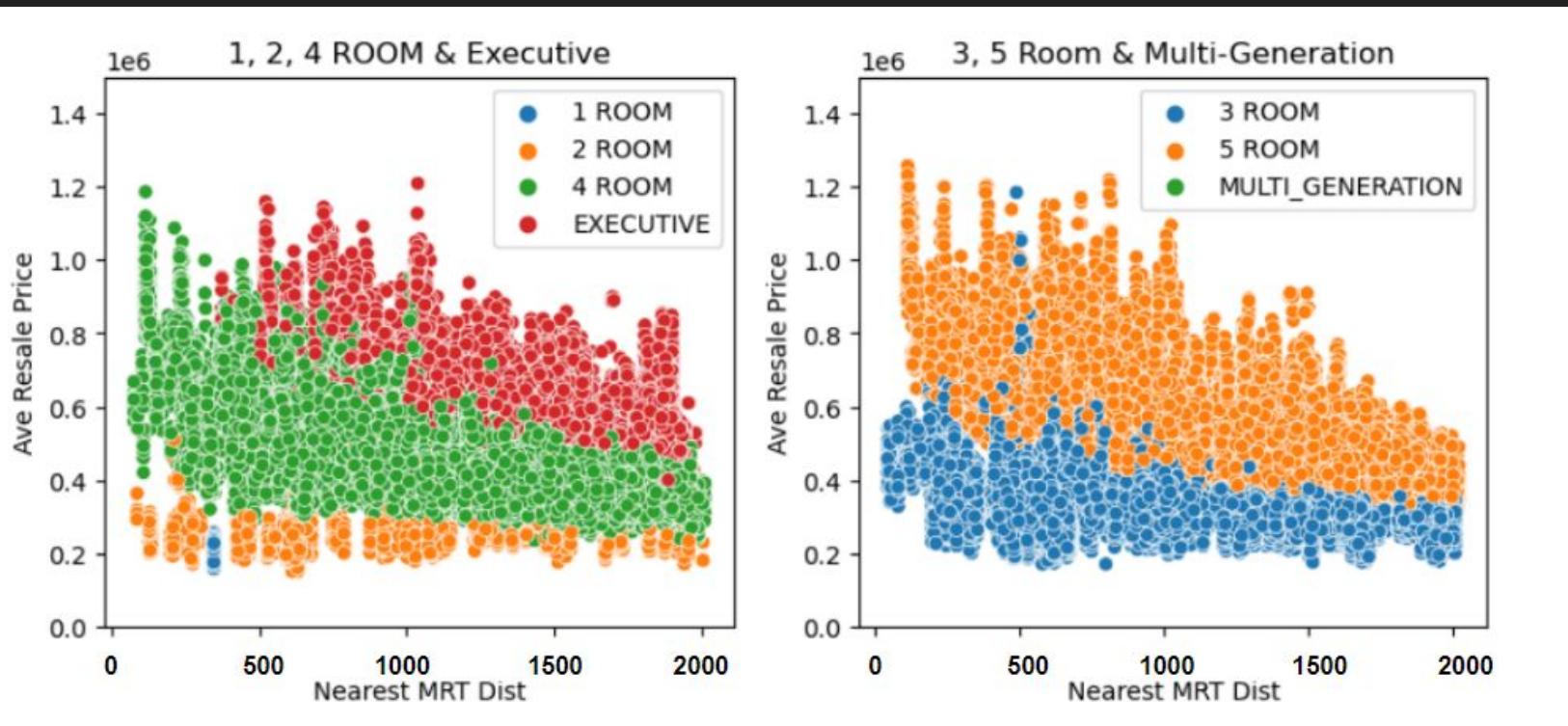
To Infinity & Beyond!!



Max Floor Level



MRT Nearest Distance





03

Analysis Part 2

The larger the house, the more expensive it is.

flats are getting
smaller

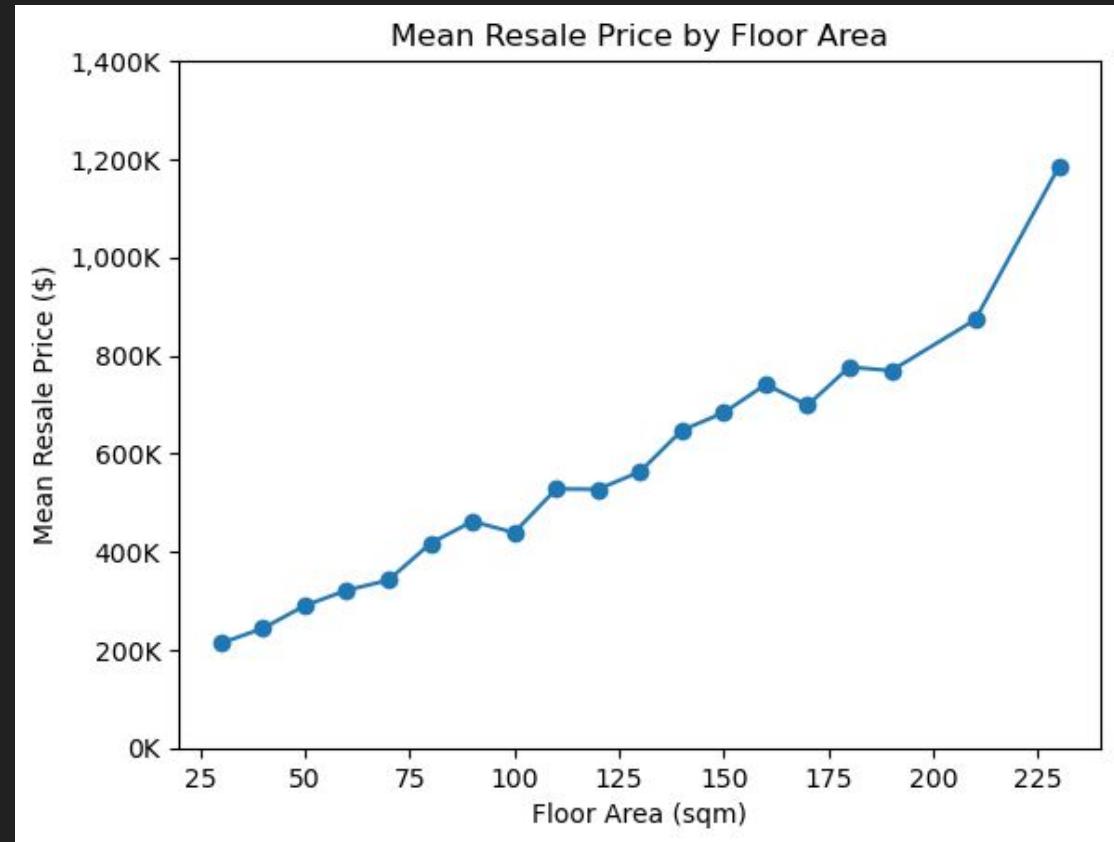
"Honey, I shrunk the
kids!"

endless
demand...

...stagnant supply

always
expensive?

"I got 99 problems and
this lease ain't one(?)"



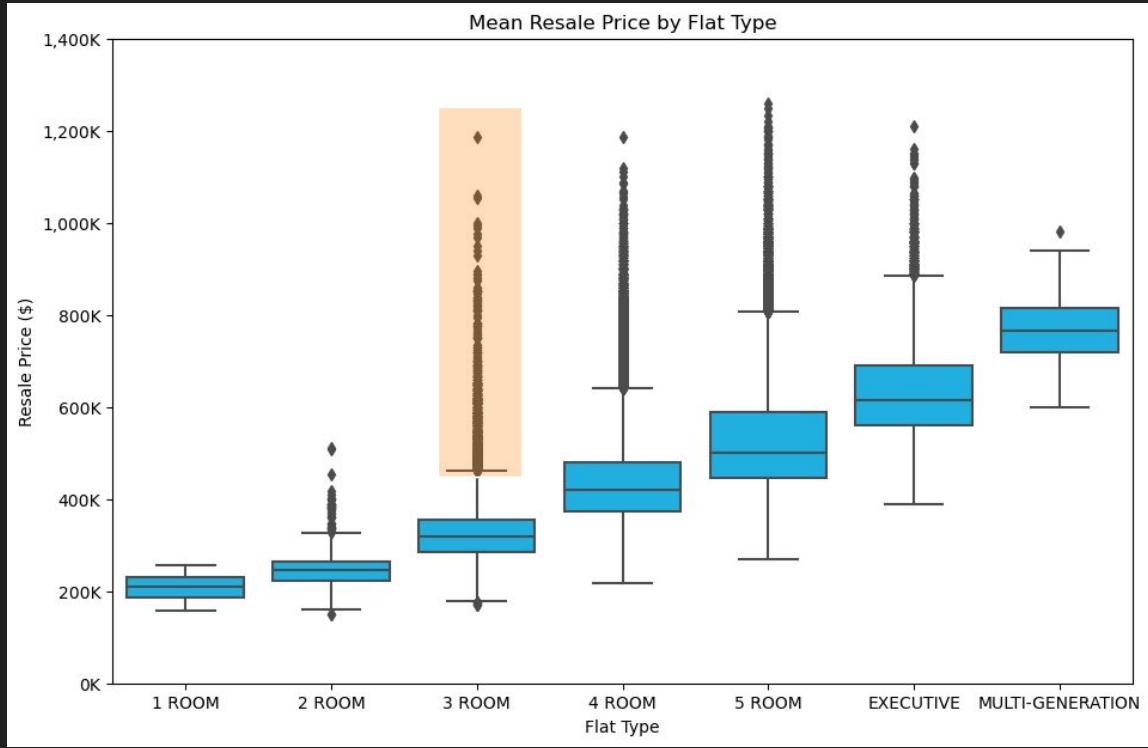
The more rooms, the more expensive.

“it’s just math”

$n_rooms = n_rooms - 1$
(...?)

5-rooms: the
black sheep

$n_rooms = n_rooms - 2$
(?!)



Price differs by location.

connectivity

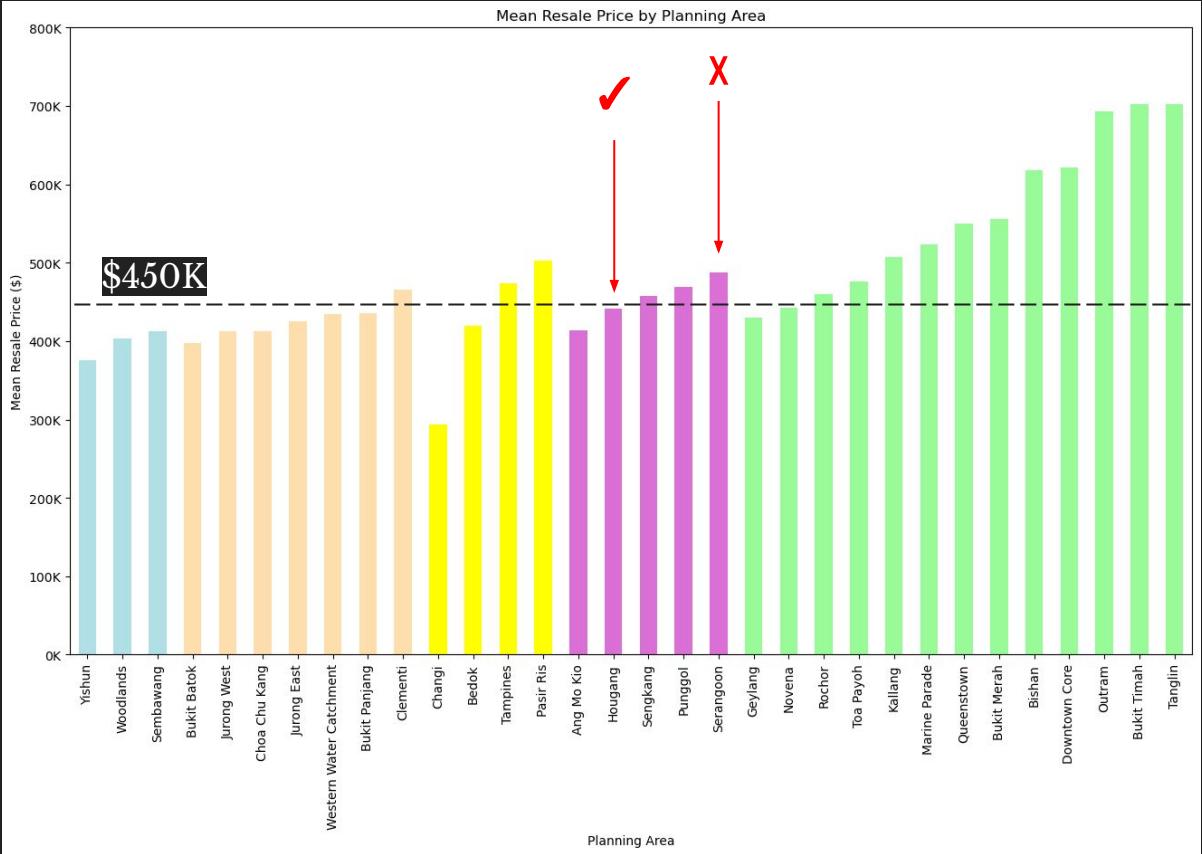


Health is wealth?
Time is wealth.

compromise



...is the key to a
healthy wallet



Price differs by flat model.

\$1M flat?

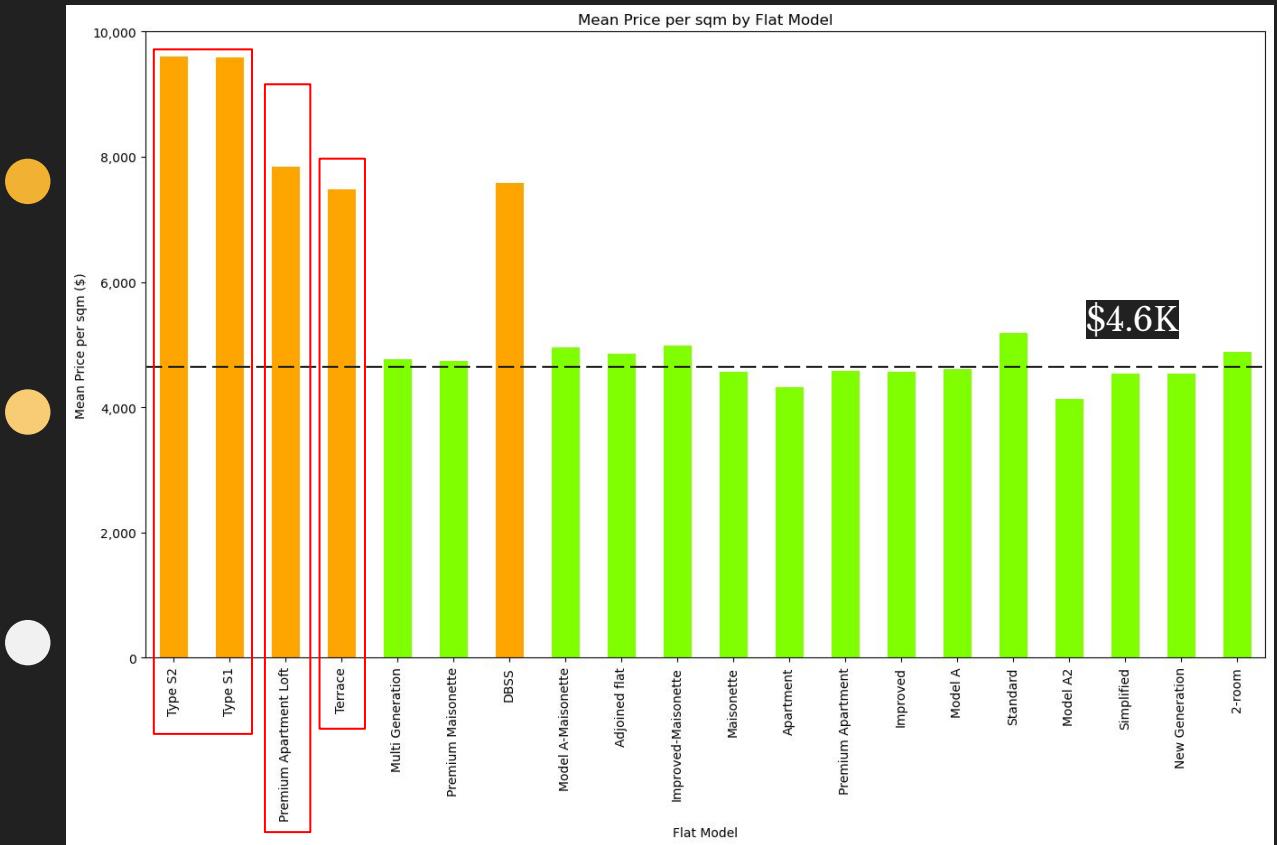
Try \$1M dollar estate!

the new
maisonette

While stocks las-
Sold out!

landed flat (?)

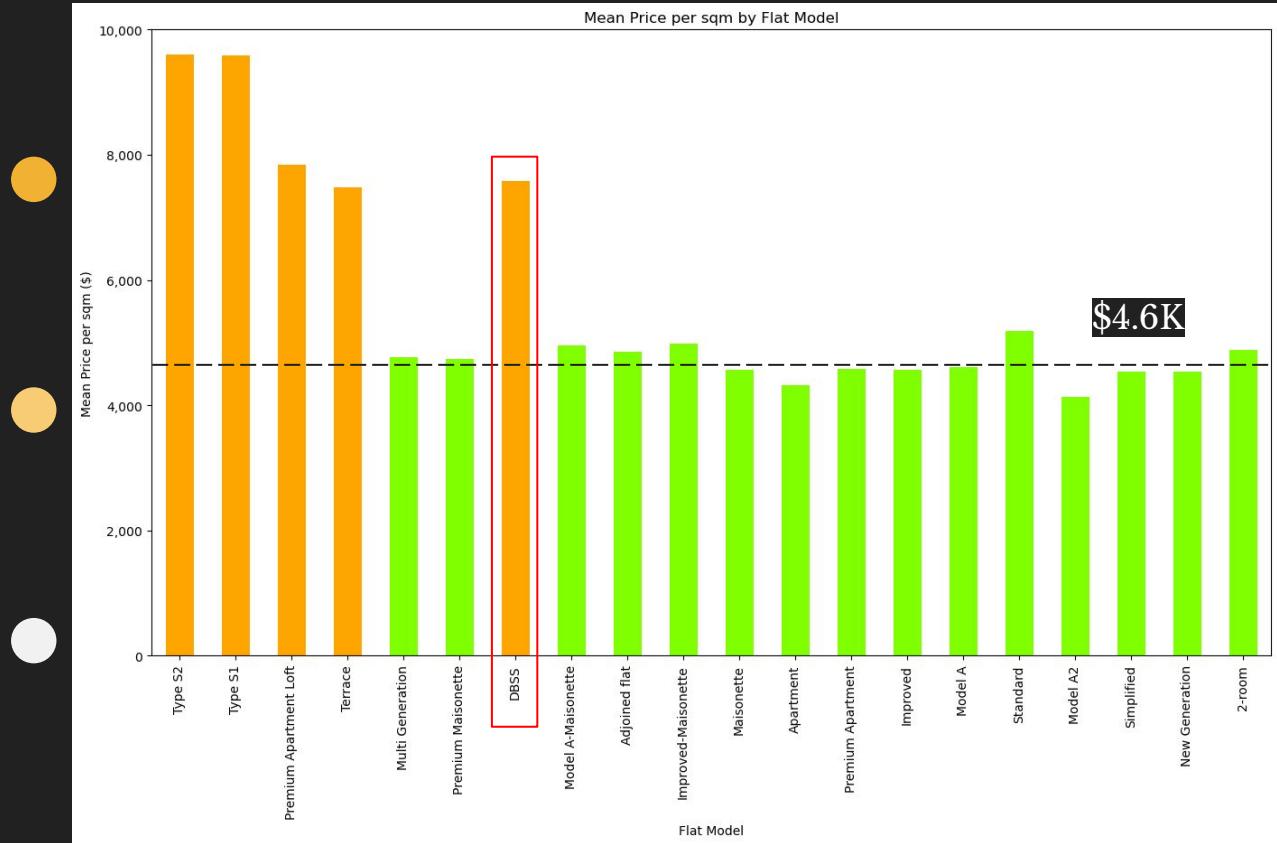
Yours for 99 55 years.



Price differs by flat model.

DBSS

✓ 5 rooms - 1 = 4 rooms

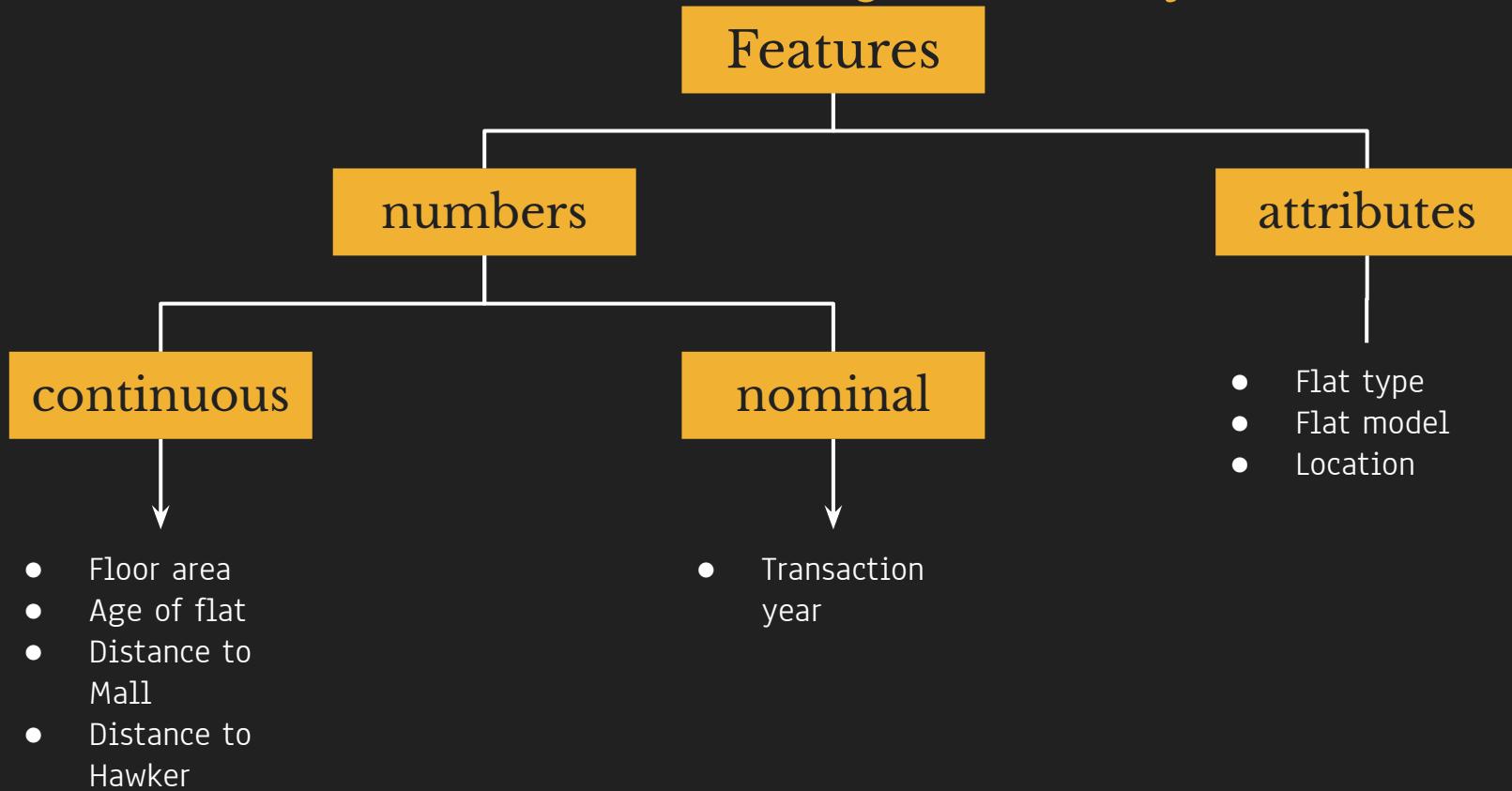


04

Features, Model & Recommendations



Some features we just analysed



Our model is built using Linear Regression



$$resale\ price = \sum_i^N Coeff_i \times Feature_i + intercept$$

Resale price: The reason **you** are here!

Coeff_i: How this feature affects the resale price

Feature_i : How this feature affect the resale price

Intercept: Likely price of flat when all Feature_i is 0



\$ 47,106.28

RMSE, or how much the predicted price can vary from actual price on average.



If we predict your flat resale price
to be: **\$600,000**
Actual resale price is likely to be
somewhere between:

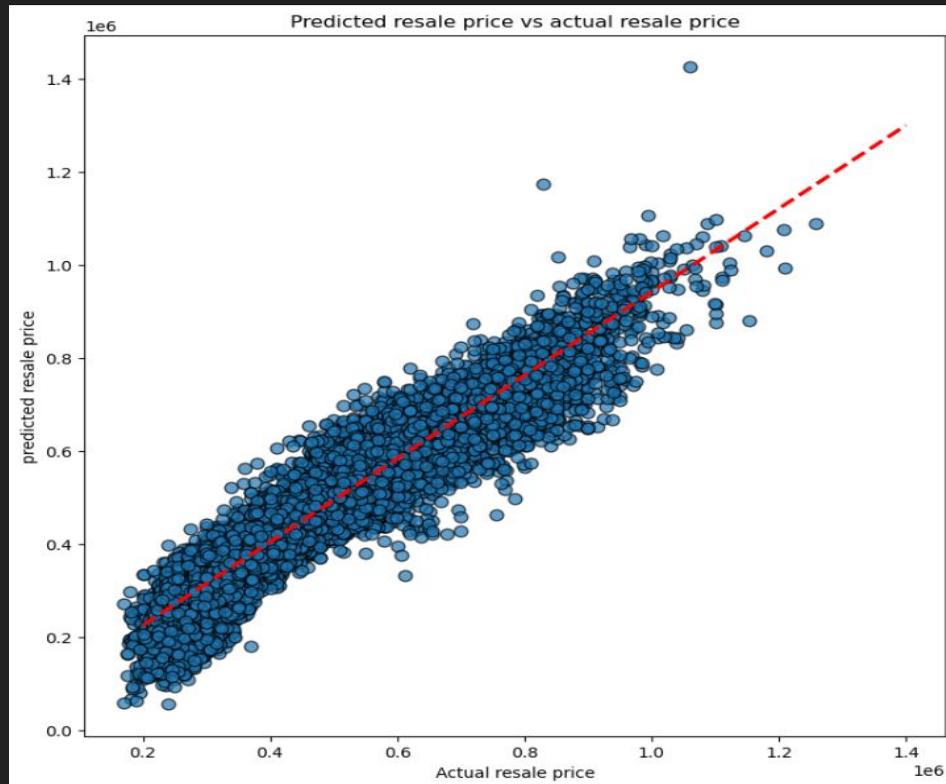
\$647,106
to
\$552,894

89.12% of the variation in the housing prices can be explained

R Squared:

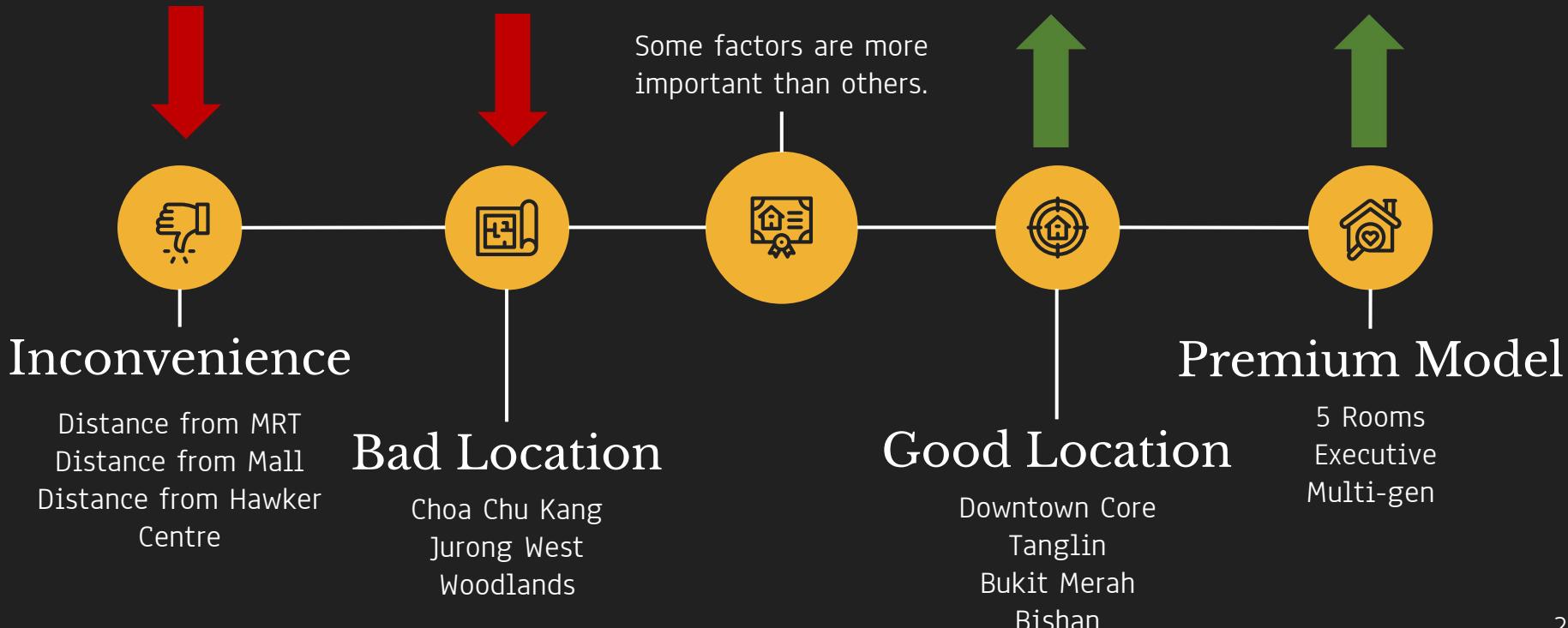
0.8912

model is able to account for 89.12% of the differences between the actual resale prices of the flats



Some important factors affecting price

Housing price depends on
a range of factors.



A photograph of a bright room with white brick walls and a large window. A pink armchair sits on a light-colored wooden floor. The right side of the slide features a dark background with four yellow circular icons and their corresponding text.

Secret Tips just for you



Look Around

Always check the price of nearby flats



Look Ahead

Watchout for upcoming developments



Furnishing

Renovation in the house can be a bargain chip



Property Experts

Like us!

A circular inset image in the bottom-left corner shows a modern living room. It features a light-colored sofa with several dark, textured pillows. To the left of the sofa is a small, round wooden side table with a single white floor lamp on it. The background is a dark, solid color.

Thank you!

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