

# Real Estate Mobile Application

## Features Proposals

DSIF-9

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# Presentation Outline

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- Background
- Problem Statement
- Datasets
- Data Analysis
- Key Takeaways
- Recommendations
- Future Research & Expansion



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- **Background**
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# Background

- Prices of HDB resale flats have been ***steadily rising*** over the past decade.
- Demands for resale flats are motivated by ***long waiting time for BTO flats***.
- With more options offered in the resale market, flat purchasers want to be ***more informed*** before making a purchasing decision.



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- Limitations and Future Exploration

# Problem Statement



***“What features should NexProp consider in their upcoming mobile application to provide recommendations to flat purchasers”***

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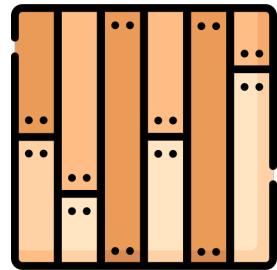
The following features were analysed to determine its effect on HDB resale prices.



Location



Types of Rental Flats



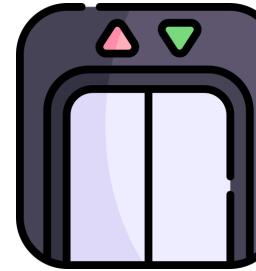
Floor Area



Distance from Amenities



Age of Flat



Storey Range

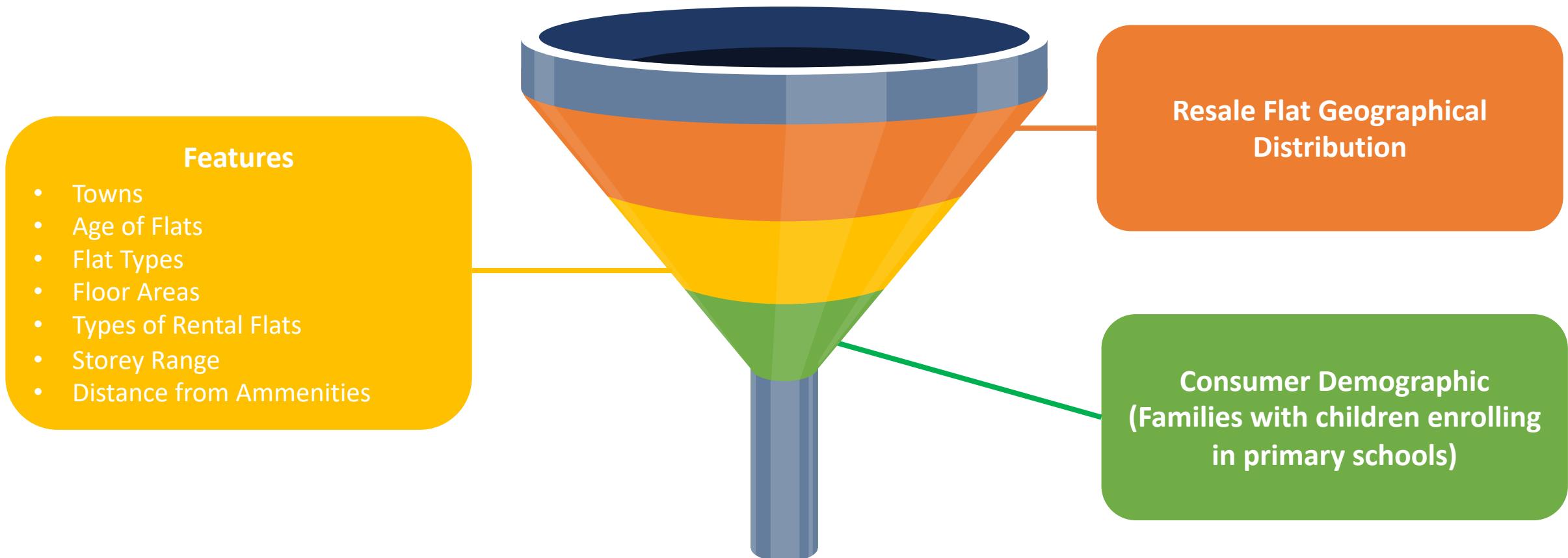
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The analysis adopts the funnel technique, beginning with the geographical distribution of resale flats, diving deeper into features and concluding with an tailor-made recommendations based on a sample consumer demographic.



# Geographical Distribution of Flats

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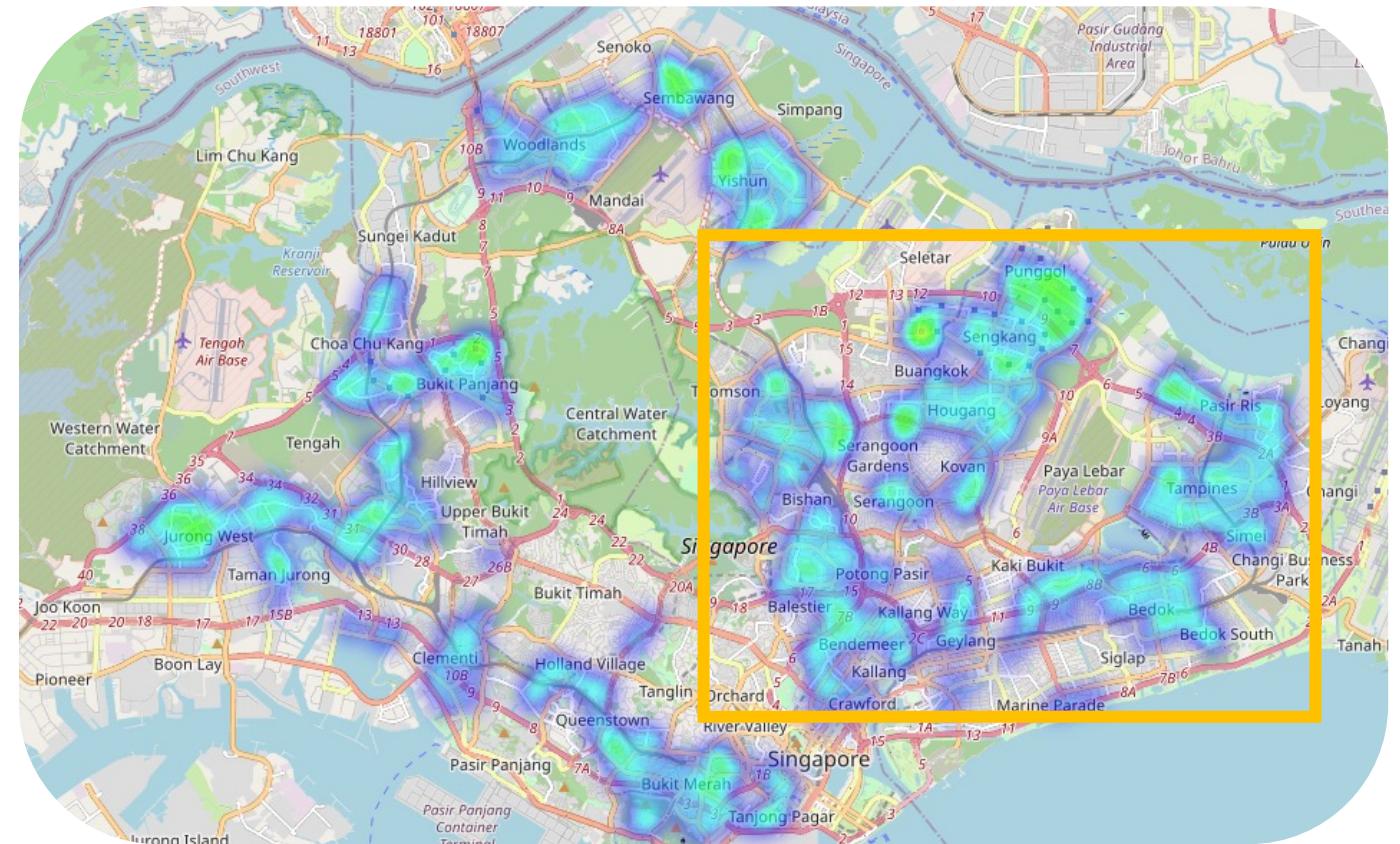


HDB resales flats are generally well geographically distributed across the nation with certain areas providing more purchasing options.



### Key Findings

- Singapore HDB flats are *generally well distributed*.
- Buyers have *plenty of resale flat options* to choose from.
- *East of Singapore* is more *densely populated* with options.



# Features

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- Towns
- Types of Rental Flats
- Age of Flats
- Flat Types
- Floor Area
- Storey Range
- Distance from Amenities

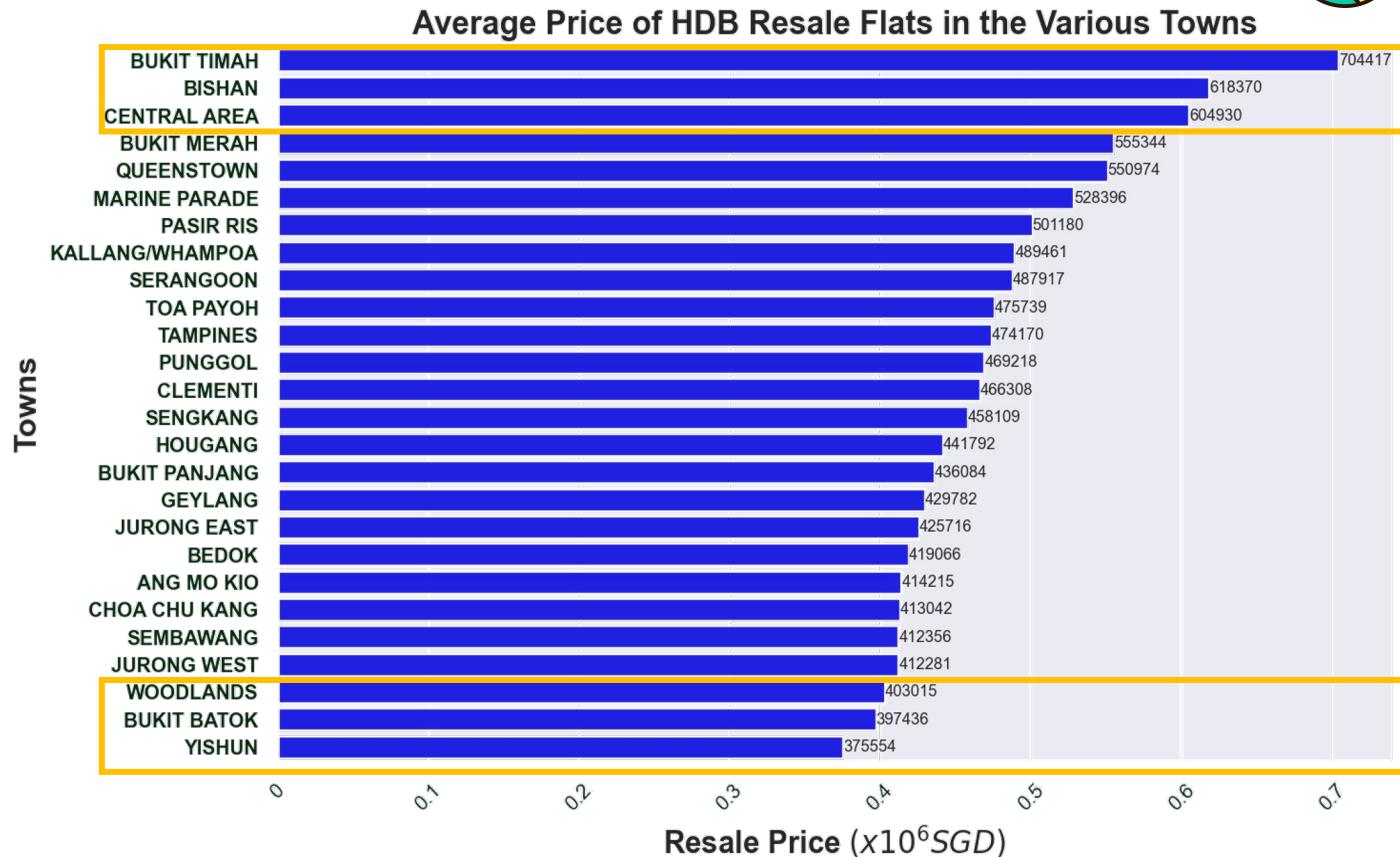




Average prices of resale flats varies across the different towns, suggesting a need to have a closer examination on other contributing factors.

### Key Findings

- **Bukit Timah, Bishan and Central Area** has the highest average resale prices for their flats.
- **Woodlands, Bukit Batok and Yishun** has the lowest average resale prices for their flats.
- The towns where these flats are located are just **one of many factors** that influences the future HDB resale prices.

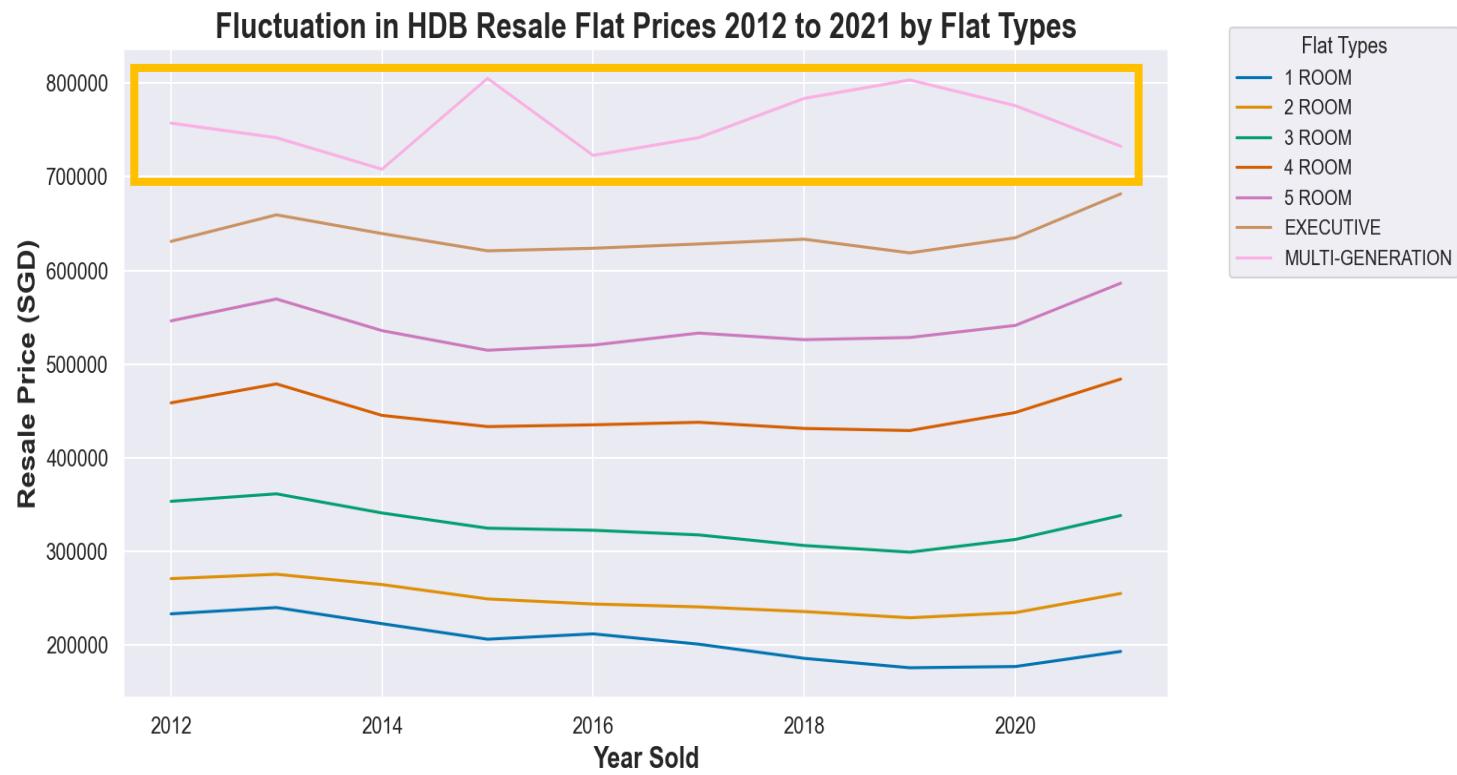




# Housing prices have seen fluctuations over the past decade with majority of flat types following a similar pattern.

## Key Findings

- Resale prices of flats are ***within their own margins.***
- Most flat types, except ***Multi-Generation flats,*** followed a similar trend.
- Buyers who do not fit the eligibility criteria for multi-generation flats could opt for an ***Executive flats*** instead.

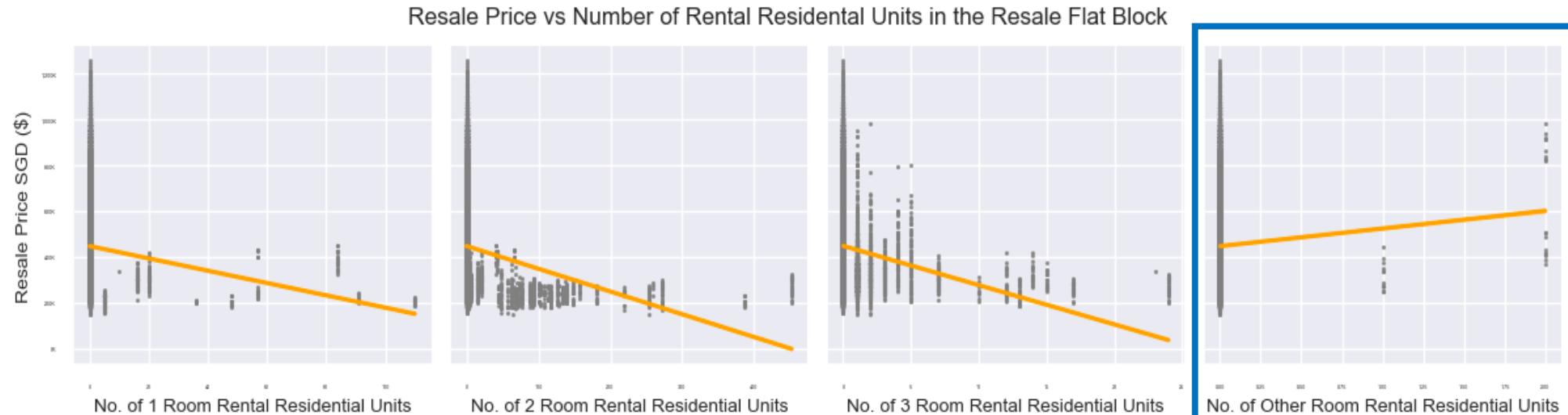


**Presence of rental units affects the perception of the building which in turn, dampens resale prices while other rental units are attractive to investors.**



### Key Findings

- Rental flats are mainly intended to provide affordable housing for *lower-income Singaporeans*.\*
- As the number of *rental units increases*, there will be *less demand* for the coexisting units in the rental flat, *driving resale prices down*.
- Other rental units, beyond 1-3 Room flats that *do not fall within the public rental scheme*, have *higher rental income potential* which is attractive to investors, potentially *driving the resale prices up*.



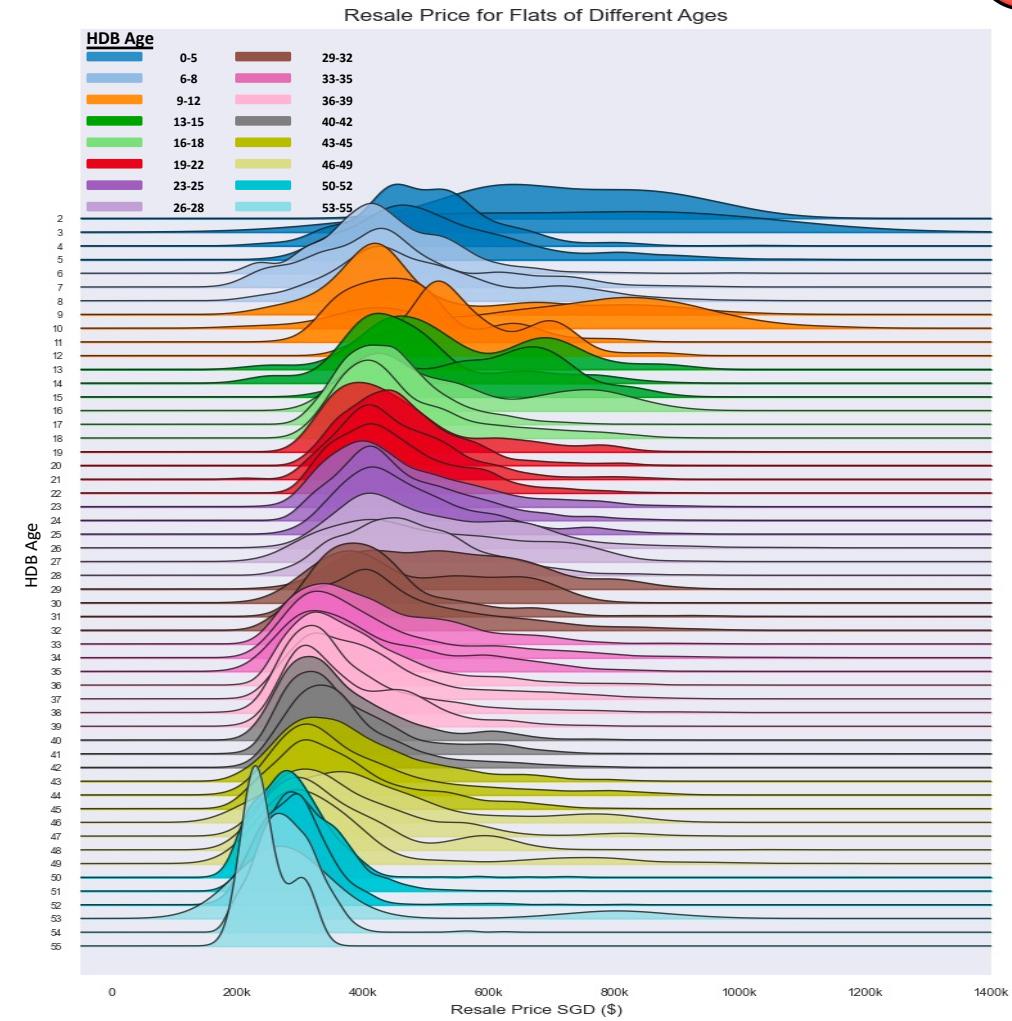
\* Source: Renting from HDB Eligibility Criteria and Schemes

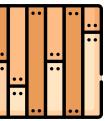
# Resale value of a 99-year leasehold flat depreciates as the flat ages, influencing the flat purchasers' decision depending on their future goals.



## Key Findings

- The value of a HDB flat *drops drastically after minimum occupation period (MOP)*.
- According to the *Bala's Curve*, as the *remaining lease decreases, the value of the land as a percentage of the freehold land decreases*.

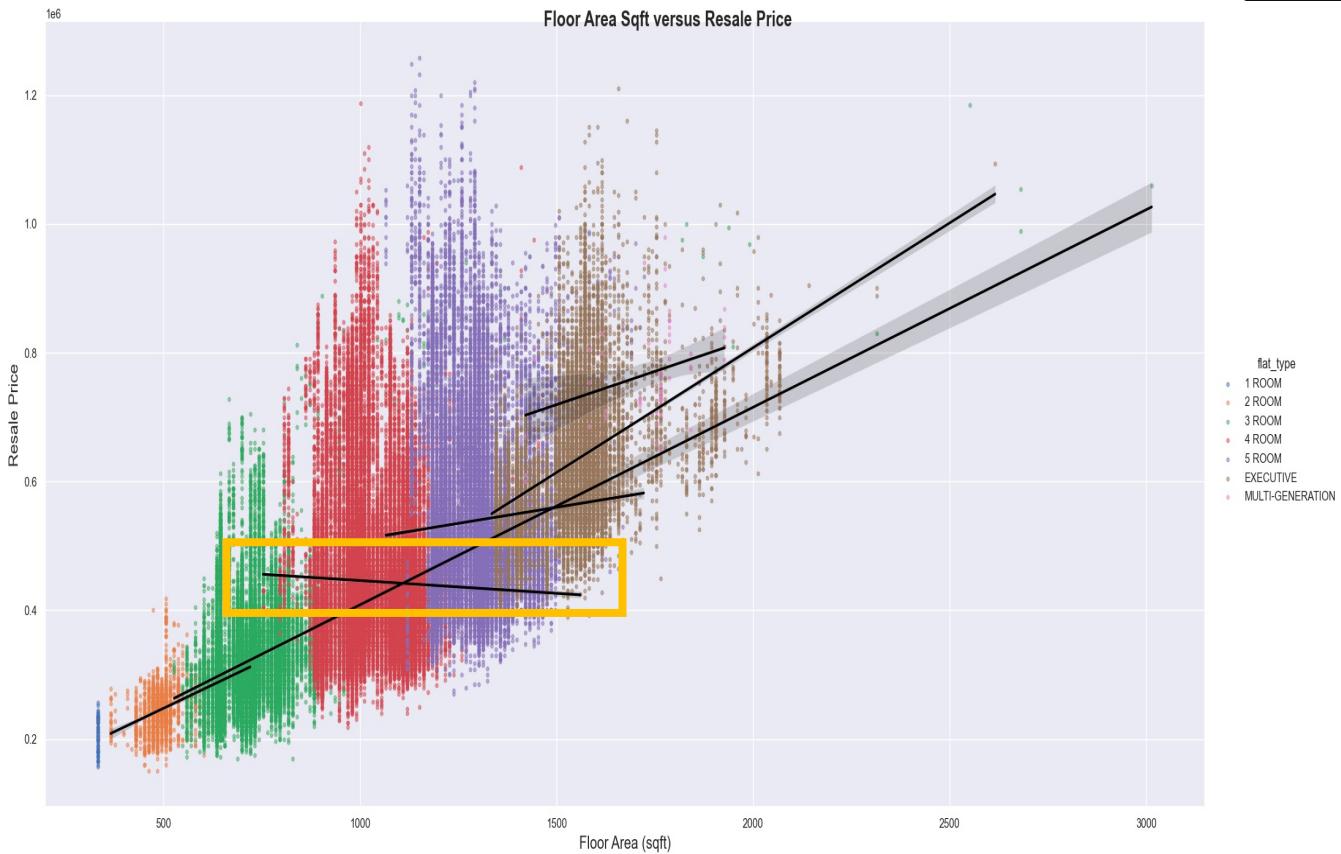




Generally, the floor area has a strong positive correlation with the HDB resale price, with an exception for 4-Room flats.

### Key Findings

- Flat purchasers should be prepared to *pay a premium* for a larger flat.
- *4-Room flats* showed a *negative correlation* with HDB resale price.
- A possible explanation could be that there was an *oversupply of larger 4-Room flats* that led to a *decrease in demand* and *resale prices*.

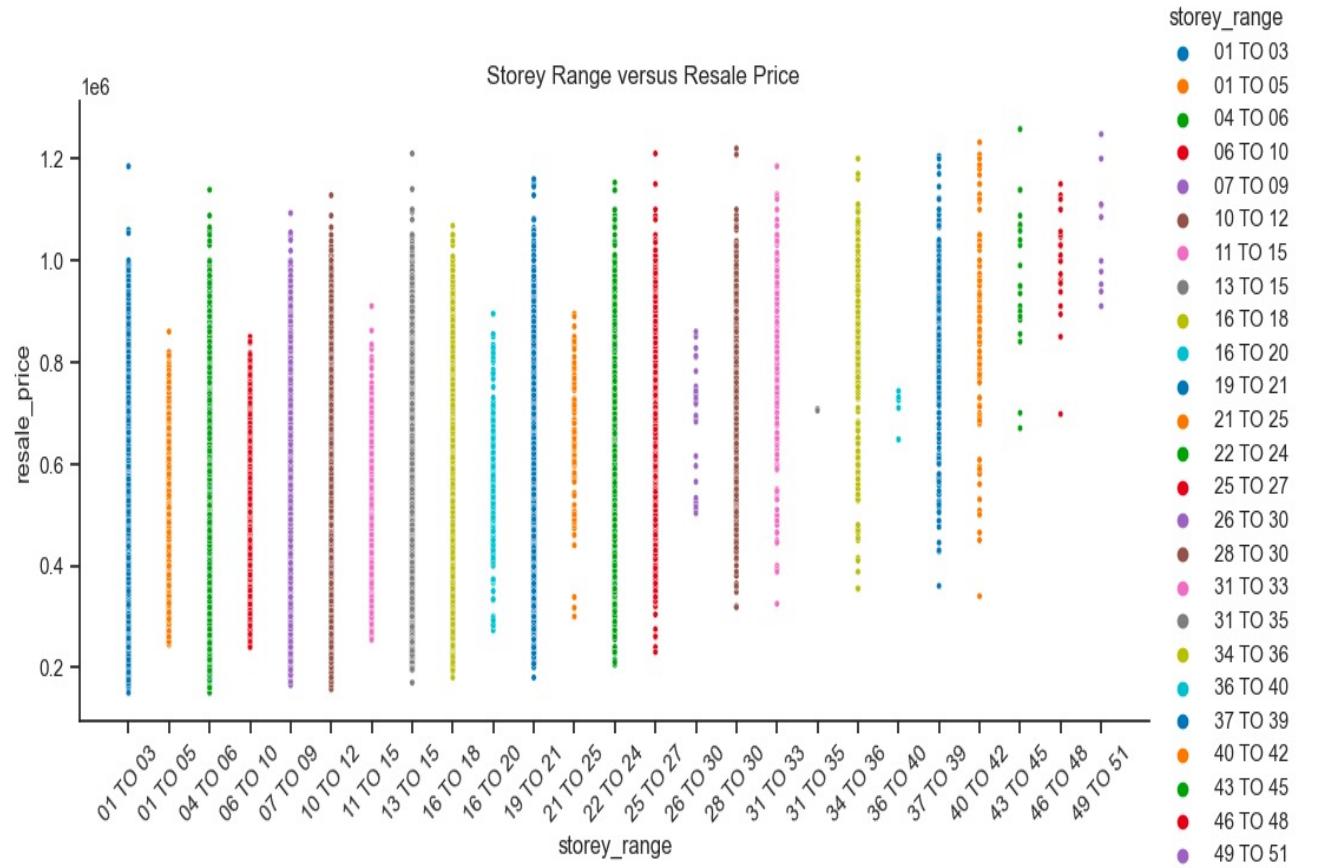


# Units on higher storeys typically command higher prices due to several reasons.



## Key Findings

- Resale flats **located at a higher storey** tend to be **pricier**.
- Flats on higher storeys have **better views, more natural sunlight, improved privacy, lower noise levels** and are associated with “**status and prestige**”\*.



\* Source: High-rise Living in Singapore Public Housing from Urban Studies

# Not all amenities that are close to resale flats have a positive impact on the resale prices.



## Key Findings

- Living close to **MRTs** and **malls** offers **accessibility and convenience**.
- Families living closer to **primary schools** have a stronger advantage for their **children to be admitted**.
- Living further away from **bus stops** means living **further away from the main road**.
- Living further away from **secondary schools** offer a **quieter environment**.
- Living near or far from **hawkers** may not be as important as other amenities.

Legend



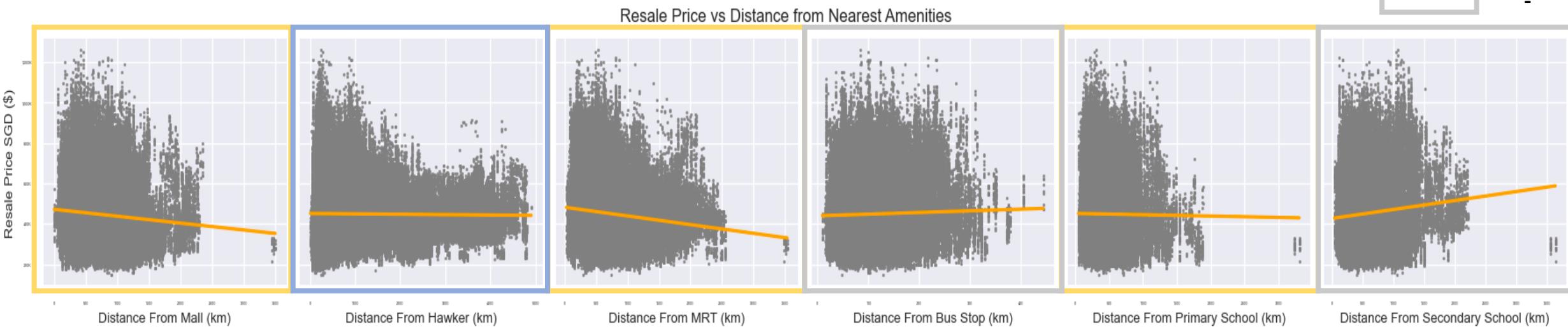
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# Demographics

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- Families with Young Children



**Towns within the vicinity of top primary schools are more expensive due to the popularity among families to enroll their children in.**



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# Key Takeaways

- Singapore's HDB resale flats are well geographically distributed with more purchasing options in the eastern region.
- Flats located in prime locations (town), with longer remaining lease, higher storey range, and larger floor area tend to command higher resale prices.
- Presence of rental flats has a mixed impact on resale prices depending on intention of the purchase.
- Different amenities have varied impact on resale prices:
  - Flats situated closer to MRT, malls, primary schools command a higher resale price.
  - Flats situated further from bus stops and secondary schools command a higher resale price.
  - Distance between a resale flat and hawkers have no significant impact on the resale price.
- Demographics influences the demands for flats.

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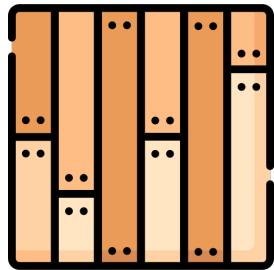
NexProp should include all these features in their prototype as they have shown to have significant effect on the HDB resale prices.



Location



Types of Rental  
Flats



Floor Area



Distance from  
Amenities



Age of Flat



Storey Range

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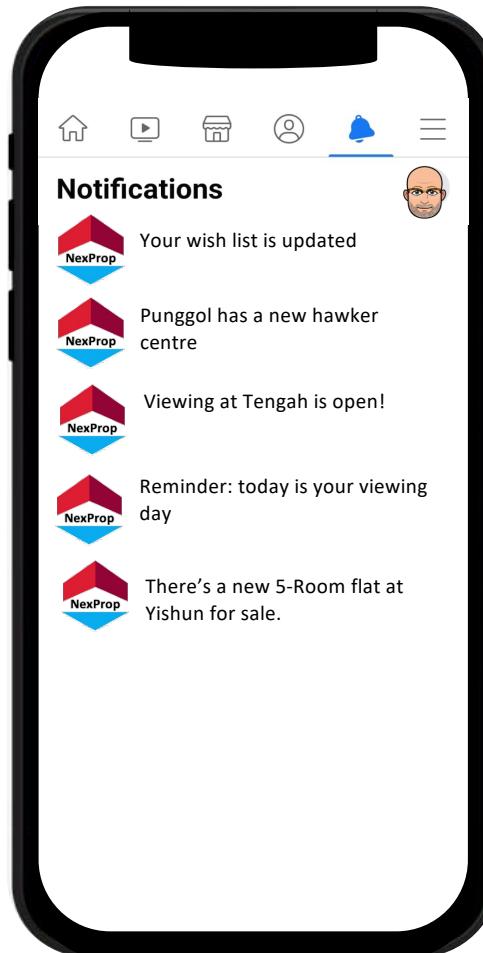
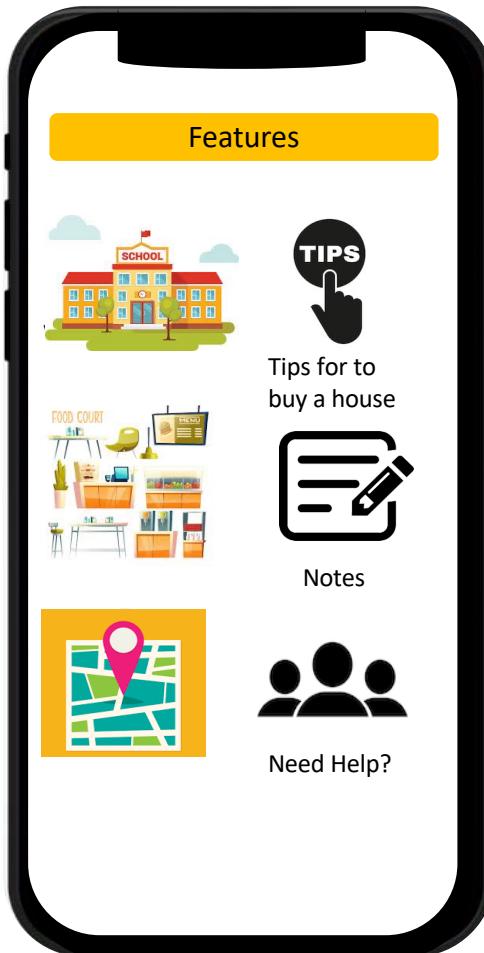
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## Future Research & Expansion

- Economical factors should be factored in future prototype as they are known to affect the supply and demand patterns.
- Having a side-by-side comparison of both BTO and resale flats in terms of their features (e.g. storey range, towns etc.) would be interesting to help flat purchasers identify which flat is best for their needs if the waiting period is not of their concerns.
- Further expansion on demographics can ensure a tailor-made recommendation for flat purchasers, improving NexProp's customer base.

# NexProp can expect a comprehensive application with simple user interface addressing the needs of flat purchasers!



# Thank you



# Citations

1. *4 factors that will affect your flat's resale value.* (2018, November 7). iproperty.com.sg. <https://www.iproperty.com.sg/news/4-factors-that-will-affect-your-flats-resale-value/>
2. 99.co. (2022, June 30). *4 factors affecting a property's resale value.* Singapore Property and Real Estate for Sale & for Rent | 99.co. <https://www.99.co/singapore/insider/factors-affecting-property-resale-value-2/>
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4. Cue. (2023, February 6). *How are BTO flats built, and why do waiting times vary so much?* The Straits Times. <https://www.straitstimes.com/singapore/housing/how-are-bto-flats-built-and-why-do-waiting-times-vary-so-much>
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