

Project_02

Singapore Housing Data
& Kaggle Challenge

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TABLE OF CONTENTS

01

**Background &
Problem Statement**

02

**Data Overview &
Visualization**

03

**Feature Engineering &
Cross Validation**

04

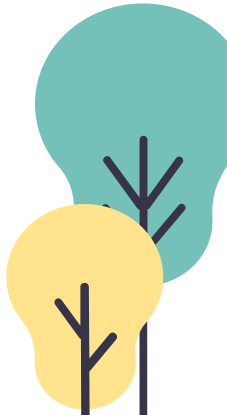
Modelling

05

**Conclusions &
Recommendations**

06

Future



01 Background & Problem Statement

Background:

- Rapid surge in property values
- Social equity concerns
- Balancing growth and affordability



Problem Statement

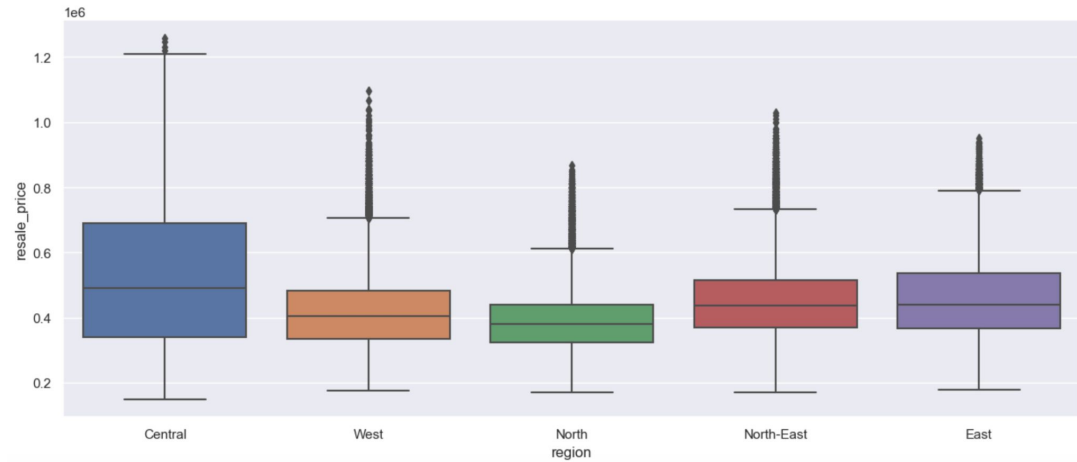
This project aims to develop a regression model that can accurately predict housing prices based on various factors such as property features, location, economic indicators, and demographic trends.



Selection

02 Data Overview & Visualization

Categorical Variables Selection



03 Feature Engineering & Cross Validation

Train Test Split

Dividing dataset into 2 subsets:

- Train Set - Train the model
- Test Set - Evaluate model's performance



Numerical Features

`StandardScaler`:

Scales the data into the same size



Categorical Features

`get_dummies`:

Converts data into numerical format



03 Feature Engineering & Cross Validation

Linear Regression

Train: $-1.9e+17$
Test: 0.72
Terrible!



Ridge Regression

Train: 0.79
Test: 0.73
Best!



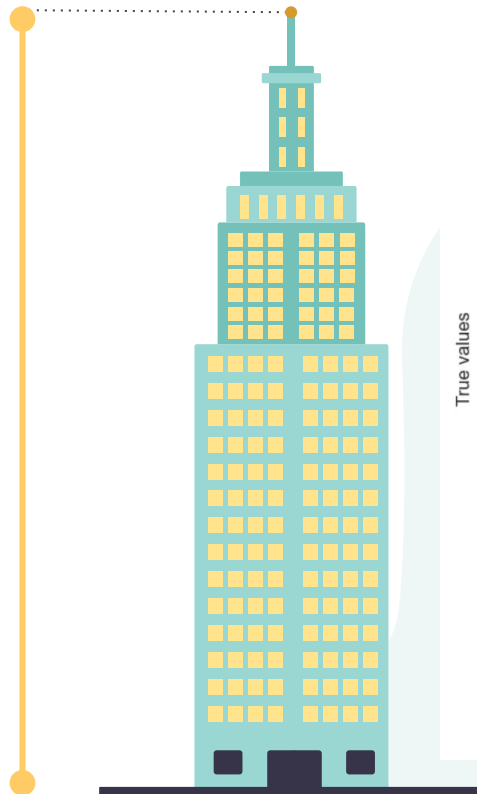
Lasso Regression

Train: 0.78
Test: 0.71
Good



Selected Model

Ridge
Regression!



04 Modelling (Kaggle Submission)

Submission and Description



result.csv

Complete (after deadline) · 7h ago

Private Score ⓘ

Public Score ⓘ

66593.2626

66092.88454



05 Conclusion & Recommendations

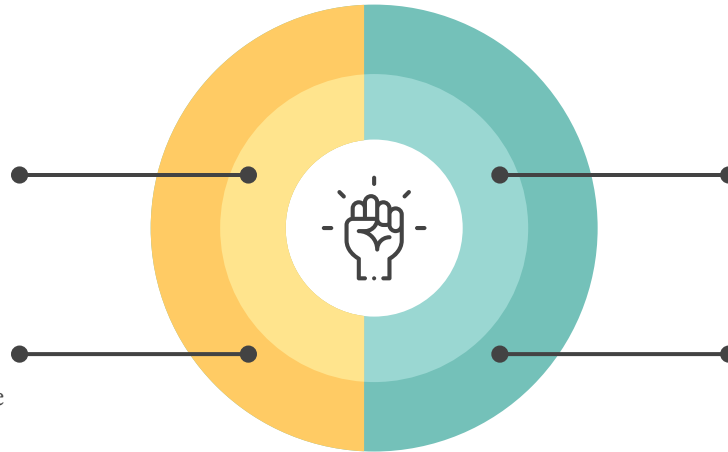
Conclusion

Significant Factors:

- Flat Models
- Regions
- Floor Area Square Meter

Policy Insights:

- Valuable Insights
- Variables & Housing Price



Recommendations

Manage Speculation:

- Property Cooling
- Taxes

Regular Market Monitoring:

- Potential Housing Bubbles
- Maintain Market Stability



Stakeholders



- External factors: Government policies, interest rates.
- Collaboration with stakeholders, policymakers.

— The Future



THANKS

Does anyone have any questions?

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