



ANALYTICS DASHBOARD

HDB RESALE

FLATS

FIDES ANGELENE MANALO



OBJECTIVE & KEY GOALS

To build a descriptive analytics dashboard for HDB resale flats, revealing patterns and trends in Singapore's real estate market.

- Identify price trends by town, flat type, and floor area
- Create interactive visuals for user exploration
- Support decision-making with KPIs and heatmaps

DATA PREPARATION & CLEANING

- Loaded and explored 141,668 rows from HDB resale flat dataset
- Renamed all column titles (Capitalized, replaced underscores with spaces)
- Created new column: Price Per Sqm = Resale Price / Floor Area Sqm
- Converted 'Month' to datetime and extracted 'Year'
- Handled missing values in 'Remaining Lease':
 - → Imputed using: $99 - (\text{Year} - \text{Lease Commence Date})$
- Dropped or retained columns based on analysis use case



MARKET OVERVIEW

Visuals:

- Cards: Total Transactions, Average Resale Price, Avg Price/Sqm
- Bar Chart: Town vs Avg Resale Price
- Filled Map: Avg Resale Price by Town (Lat/Lon)
- Slicers: Year, Town, Flat Type



PRICE TREND

Visuals:

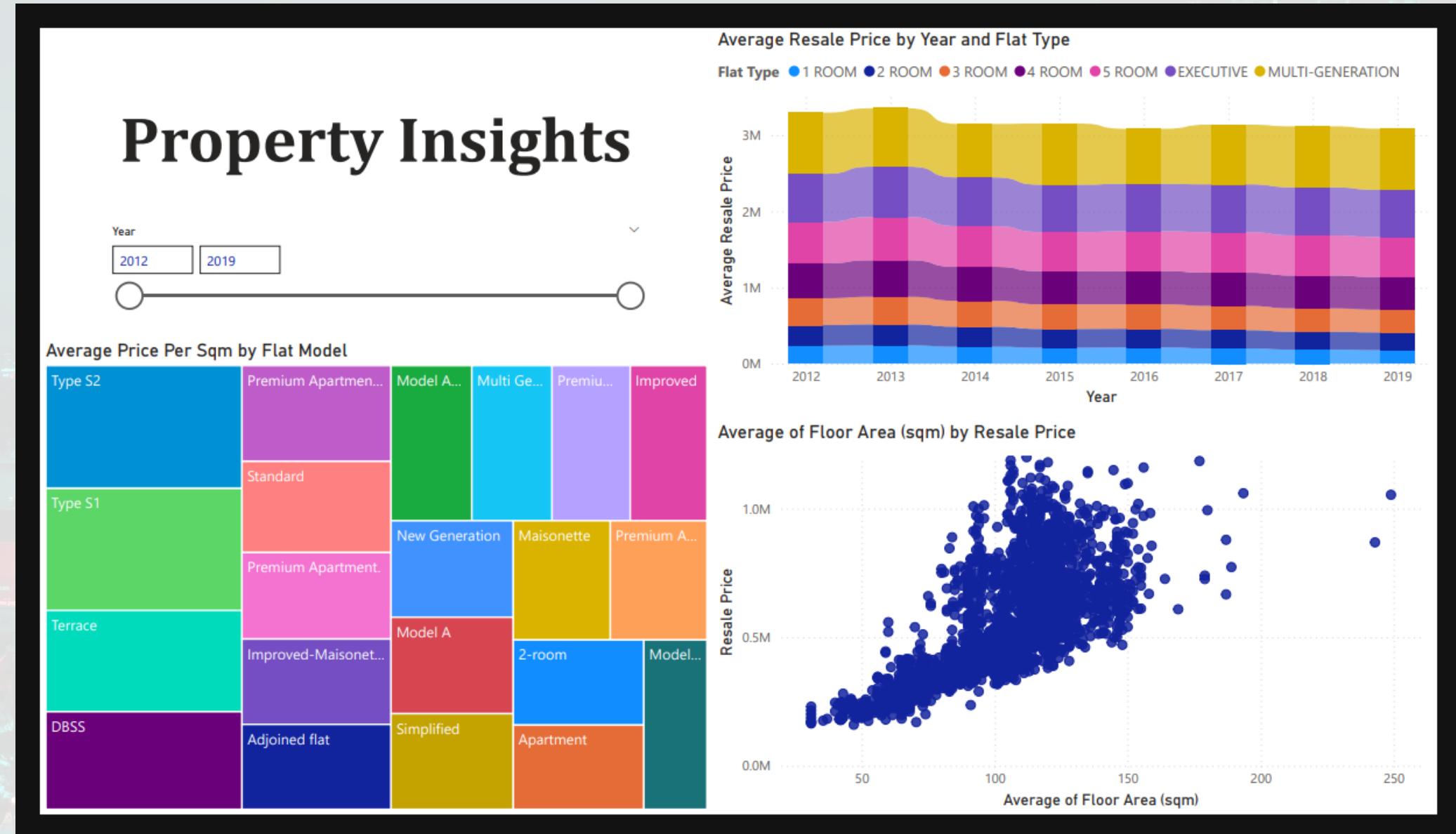
- Line Chart: Year vs Average Resale Price
- Stacked Column Chart: Year vs Avg Resale Price by Flat Type
- Slicers: Town, Flat Type, Year



PROPERTY INSIGHTS

Visuals:

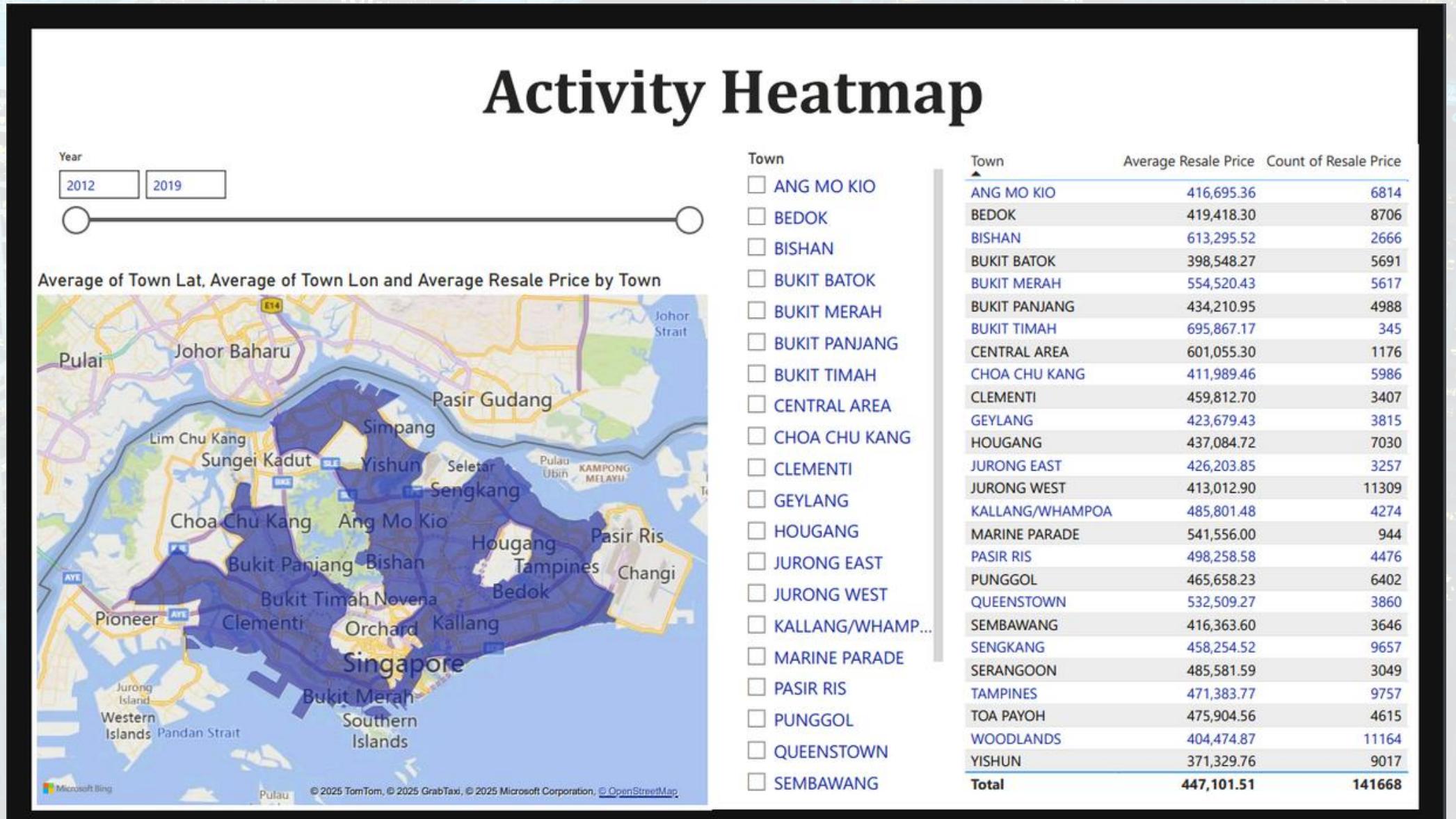
- Treemap: Flat Model vs Avg Resale Price
- Scatter Plot: Flat Type vs Avg Floor Area (with Price as tooltip/color)
- Ribbon Chart: Avg Resale Price by Flat Type across Years
- Slicers: Storey Range, Flat Type



ACTIVITY HEATMAP

Visuals:

- Filled Map: Avg Resale Price by Town
- Table: Town | Avg Resale Price | Count of Transactions
- Bar Chart (optional): Top 10 towns by transaction count
- Slicers: Year, Town, Flat Type



POWER BI - INTERACTIVITY

01

- Slicer Syncing:
 - → View > Sync Slicers > Apply across all pages

02

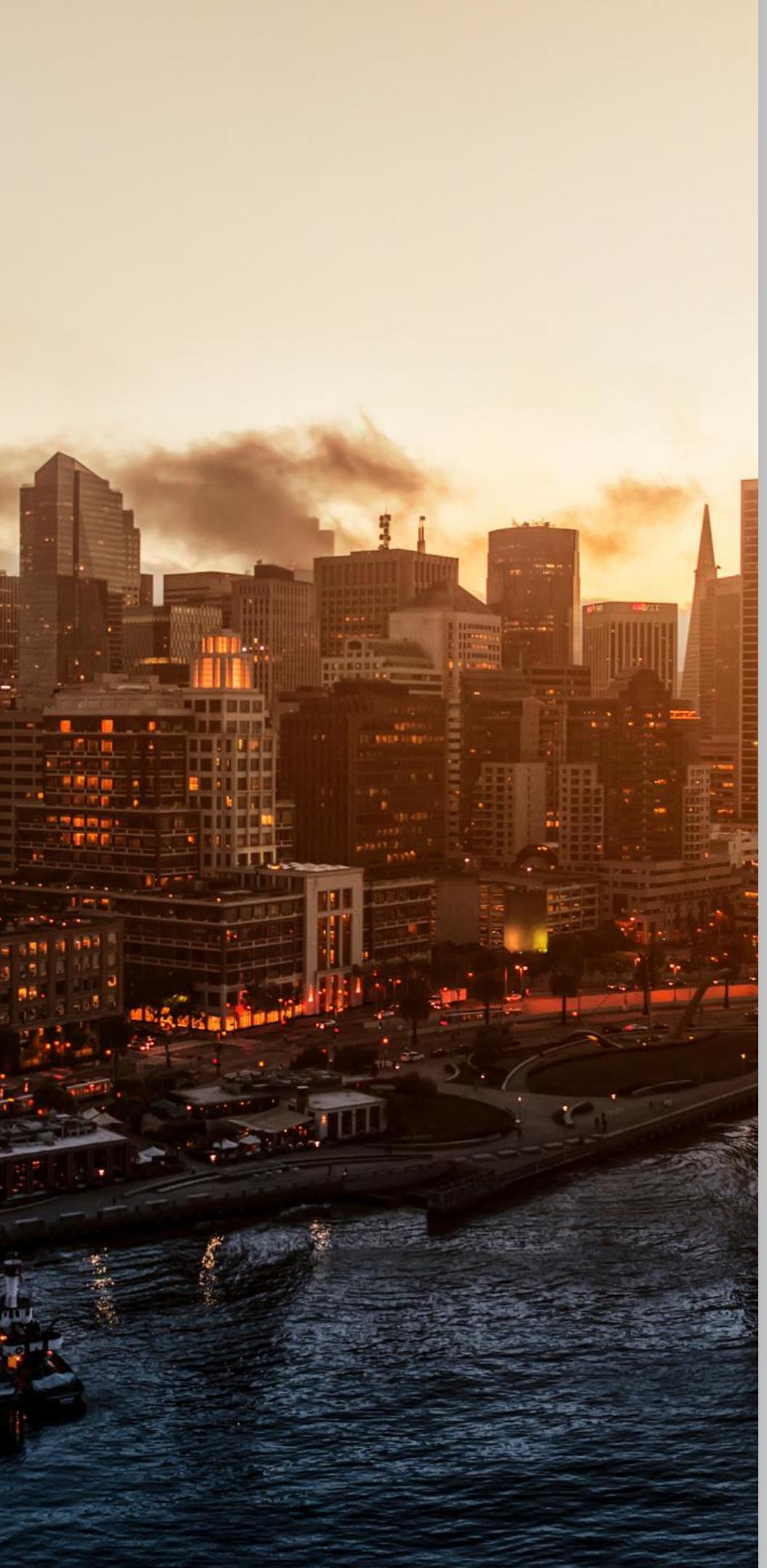
- Tooltip Setup:
 - → Use Avg Resale Price + Price per Sqm for richer insights

03

- Visual Enhancements:
 - → Sort charts by values, adjust labels, and apply themes

04

- Filtering:
 - → Year, Flat Type, Town



CONCLUSION & RECOMMENDATIONS

- Clear pricing insights by town and flat type
- Size-adjusted pricing helps identify true value
- Recommend:
 - → Use imputed lease values to preserve data
 - → Include both Avg Resale Price & Price Per Sqm for comparison
- Future Study:
 - Predictive Analytics - Implement machine learning models (e.g., linear regression, XGBoost) to predict future resale prices based on features like flat type, town, and lease.
 - Demand Forecasting - Use time series analysis to forecast transaction volume per town or flat type.
 - Geospatial Insights - Integrate external data (e.g., proximity to MRT, schools, malls) to enhance price/value analysis.

