

Dubai Housing Market Intelligence Dashboard

1. Introduction

This project explores housing market trends in Dubai using a dataset of 50,000 residential property listings. The goal is to provide data-driven insights for buyers, investors, and real estate analysts through an interactive Power BI dashboard. The dashboard highlights patterns in property price, size, age, and category, while allowing dynamic filtering by location, category, and more.

2. Dataset Overview

Size: 50,000 listings

Main Columns:

- SquareFeet: Property size
- Bedrooms, Bathrooms
- Neighborhood: Urban, Suburb, Rural
- YearBuilt
- Price

New Calculated Columns:

- PricePerSqft = Price / SquareFeet
- PropertyAge = 2025 - YearBuilt
- ListingCategory: Budget / Mid-Range / High-End (based on price quantiles)

3. Data Cleaning & Preparation

- Verified there were no missing or duplicate rows.
- Corrected data types for all columns.
- Removed 22 listings with negative prices to eliminate invalid entries.
- Removed price outliers by filtering for listings between 25,000 AED and 500,000 AED. This range was selected based on domain knowledge and statistical distribution to ensure analysis reflects realistic market values.

4. Dashboard Design

The Power BI dashboard consists of:

KPI Cards:

- Total Listings
- Average Price
- Highest Price
- Average Price per Sqft
- Average Property Size

Charts:

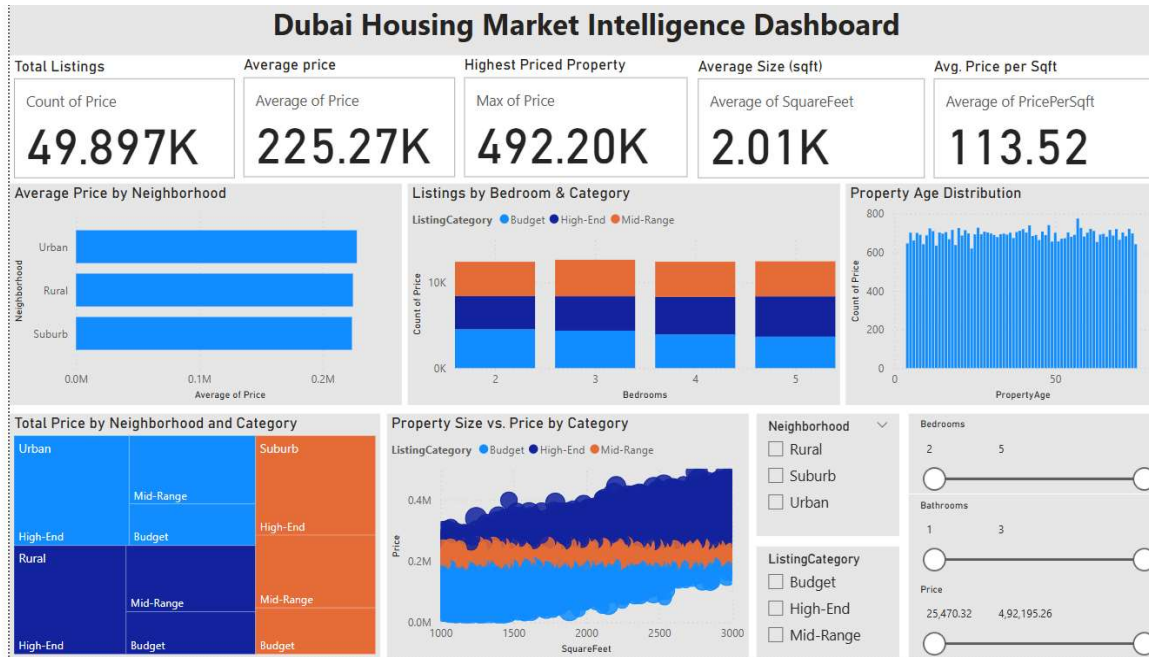
- Bar Chart: Average Price by Neighborhood
- Stacked Column Chart: Listings by Bedrooms & Category
- Tree Map: Listings by Area and Category
- Scatter Plot: SquareFeet vs Price

- Histogram: Property Age Distribution

Slicers for Interactivity:

- Bedrooms, Bathroom, Neighborhood, ListingCategory, Price

5. Dashboard



6. Key Insights

1. Prices Are Now More Realistic (*KPI Cards*)

We cleaned the data by removing wrong and extreme price values. Now, the average home price is about 225,000 AED, and the highest is just under 500,000 AED. This gives us a much clearer and more realistic picture of the market.

2. Urban Areas Cost the Most (*Bar Chart – Avg Price by Neighborhood*)

Urban homes are the most expensive because they're closer to work, shopping, and transportation. If you're on a tighter budget, suburban or rural homes offer cheaper options.

3. Most Homes Are Family-Sized (*Stacked Column Chart – Bedrooms & Category*)

Most listings have 2 to 4 bedrooms, which suits families well. Bigger homes like 4 or 5 bedrooms are usually luxury properties. The number of bedrooms gives a good clue about the type of listing.

4. High-End Homes Lead the Market Value (*Treemap – Listings by Area and Category*)

Urban high-end homes contribute the most to total market value, but rural mid-range and suburban properties still play a big role. This shows a healthy balance across different segments of the market.

5. The Bigger the Home, the Higher the Price (*Scatter Plot – Size vs Price*)

There's a clear trend: larger homes usually come with a higher price tag. Smaller properties are more affordable and fall into the budget range. Size really helps explain price differences.

6. Dubai Has Lots of Newer Homes (*Histogram – Property Age Distribution*)

Most properties are under 50 years old, showing that Dubai's housing market is modern and still growing. Buyers can expect newer buildings with up-to-date features.