Exploring the Dynamics of Real Estate Prices
An Analytical Case Study

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Introduction and Background

❖ Real estate business is constantly growing

❖ Growing interest in understanding what

   drives real estate prices is crucial

❖ Analysed dataset containing information on house prices, age, proximity to

   MRT stations, and local amenities could provide some insights

Challenge and Motivation

Challenges:
❖Diverse factors influencing property prices make predictions complex

Motivation:
❖To provide clear, actionable insights for stakeholders in the real estate market

❖To enhance decision making process for non-experts exploring the market

Aim and Objectives

Aim

❖Elucidate real estate prices and certain key factors relationship

Objectives

❖Identify how age influences house prices

❖Identify how proximity to MRT affects market prices

❖Evaluate convenience stores influence on and real estate prices

❖Identify how locations affect house prices

Hypothesis and Research Questions

❖Older houses have lower prices than newer ones; true or false?

❖Houses closer to MRT stations are priced higher; true or false?

❖Nearby convenience stores positively impacts house prices

❖Property prices per unit area are influenced by geographical location; true or false?

Methodology

Approach

❖ I sourced "real estate within range" dataset through CareerFoundry

❖ Cleaned the dataset using Excel by removing outliers, and imputating missing datapoints

Analytical Techniques

❖ Regression analysis was used to explore correlations between house prices and factors

❖ For location vs price analysis, I applied "OLS Regression" to have a detailed look at the involved factors

❖ I used Tableau and Python libraries to plot scatter plots
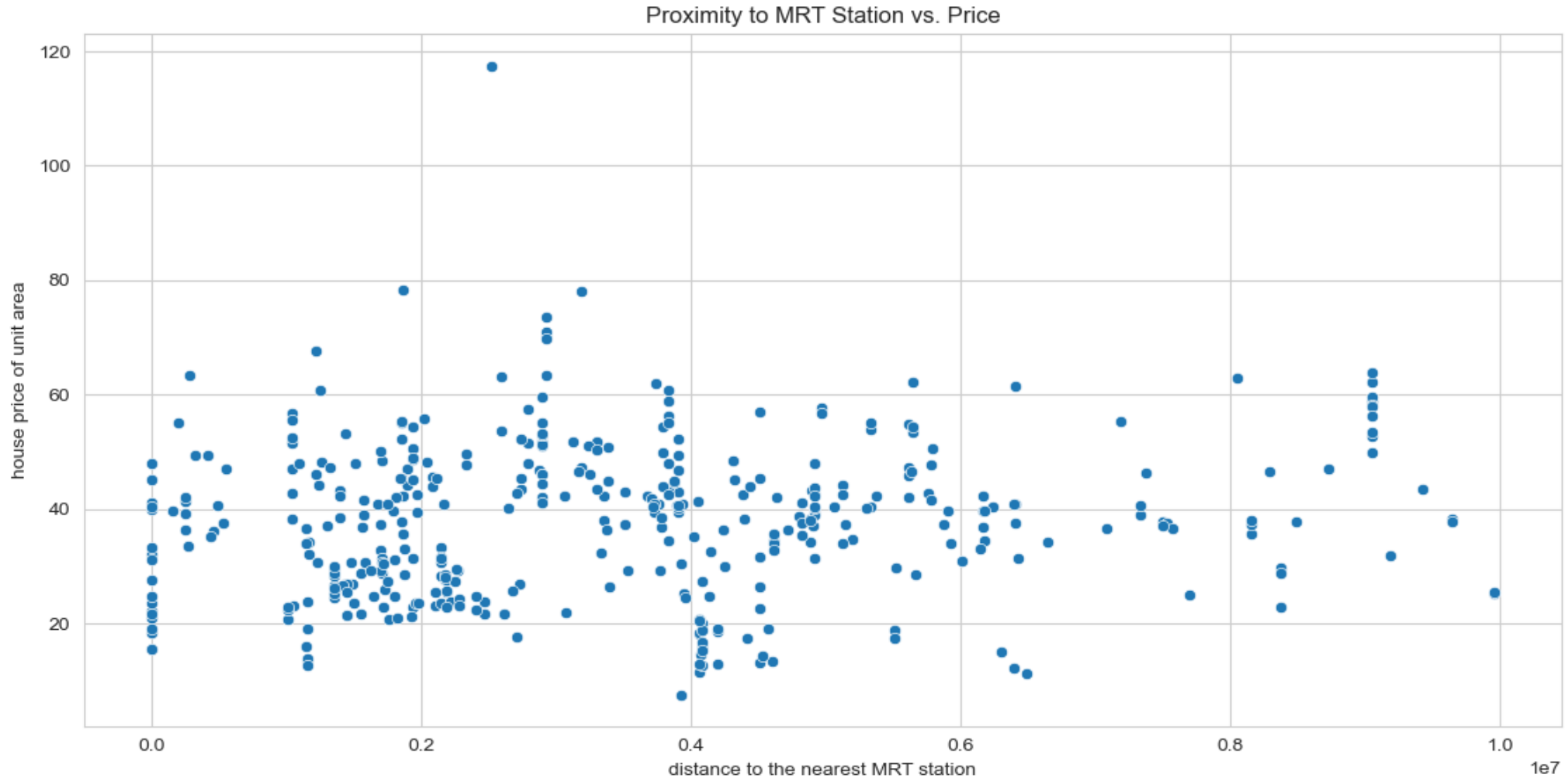
Results and Interpretation

House Age vs. Price

House Age vs. Price

R²: 0.04

(x-axis: house age; y-axis: house price of unit area)
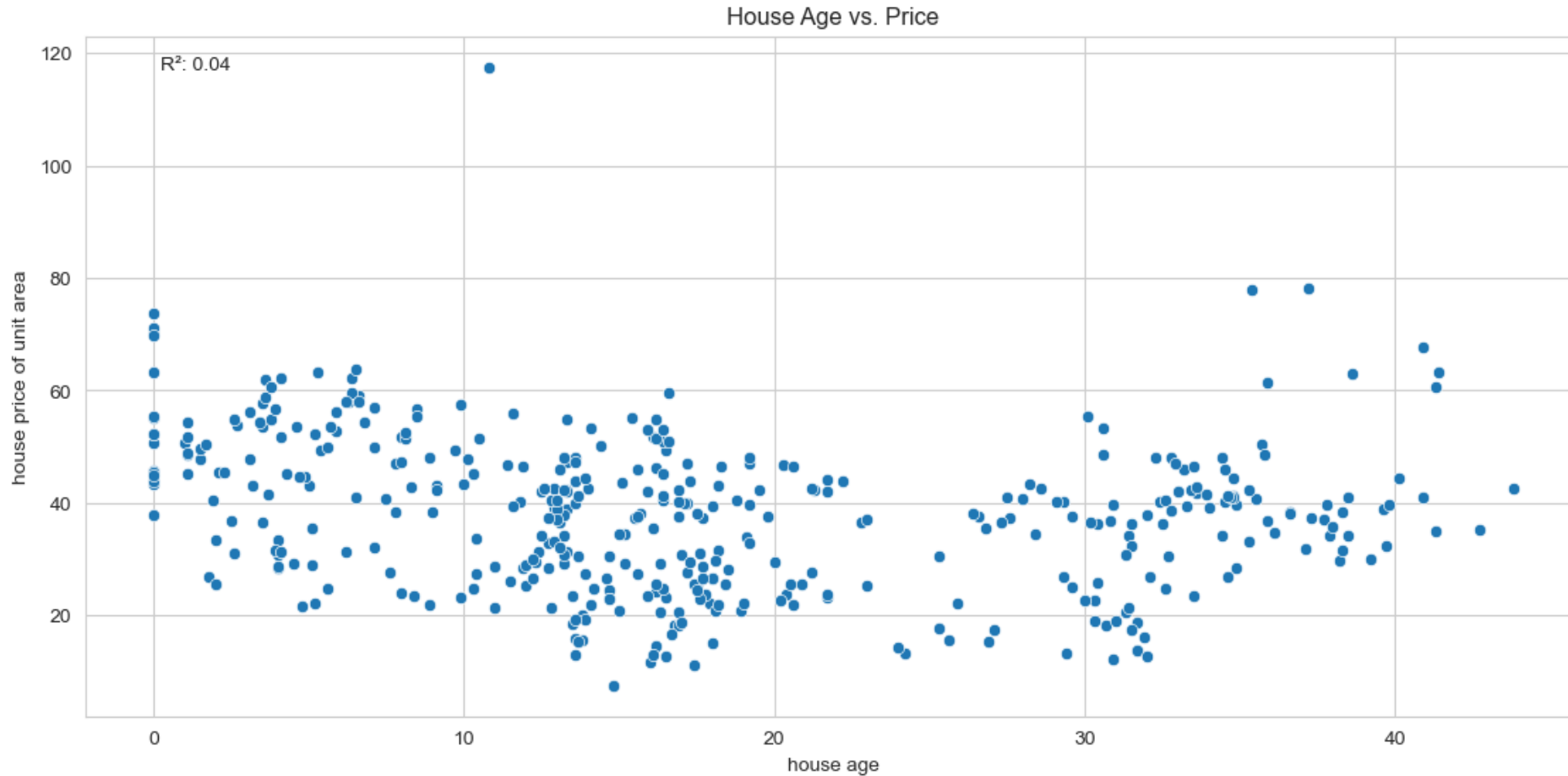
❖ Weak inverse correlation; older houses do not necessarily mean lower prices

Results and Interpretation

Proximity to MRT vs. Price
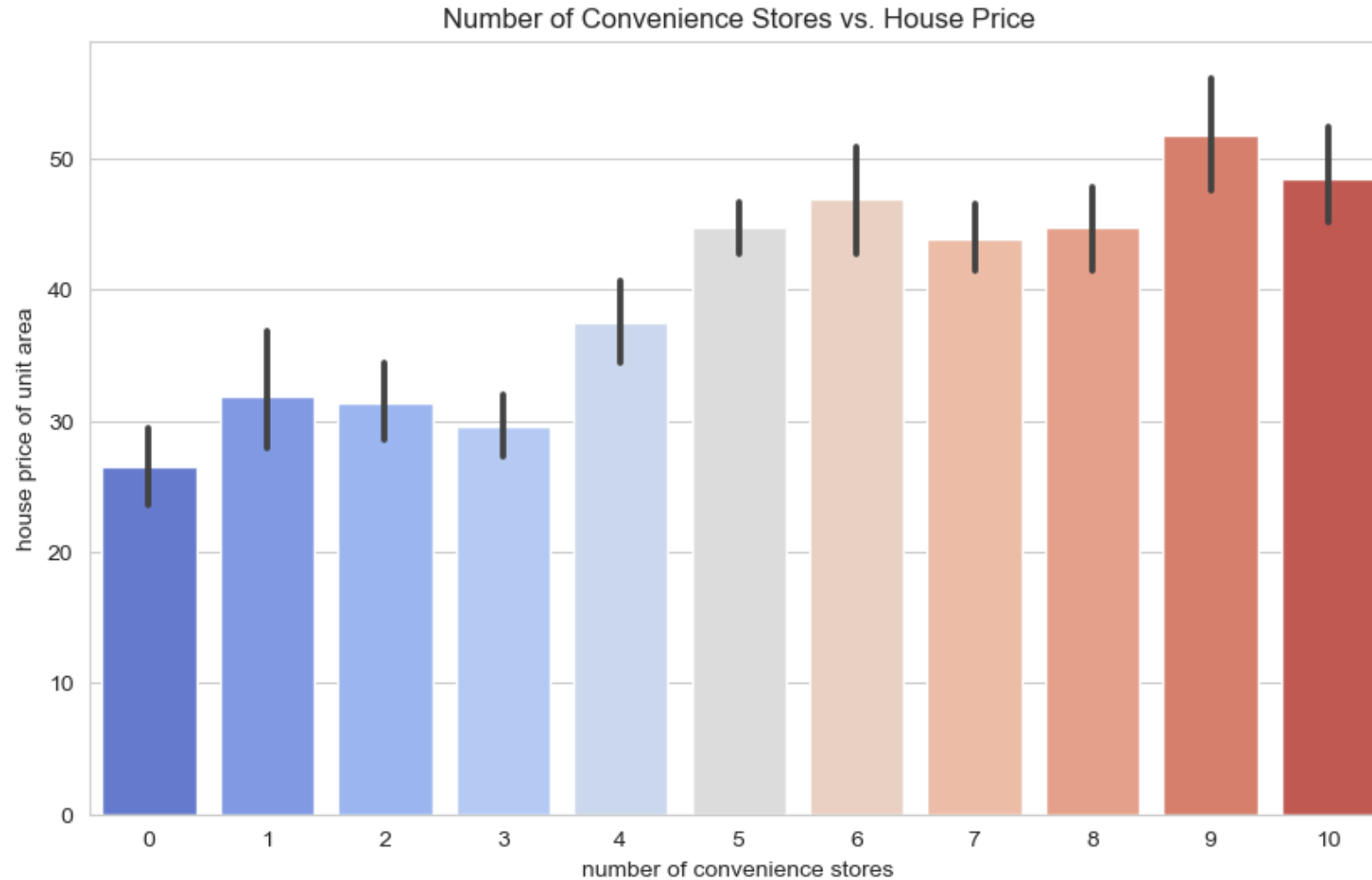

Proximity to MRT Station vs. Price

❖ Positive but weak correlation; closer houses to MRT tend to be slightly more expensive
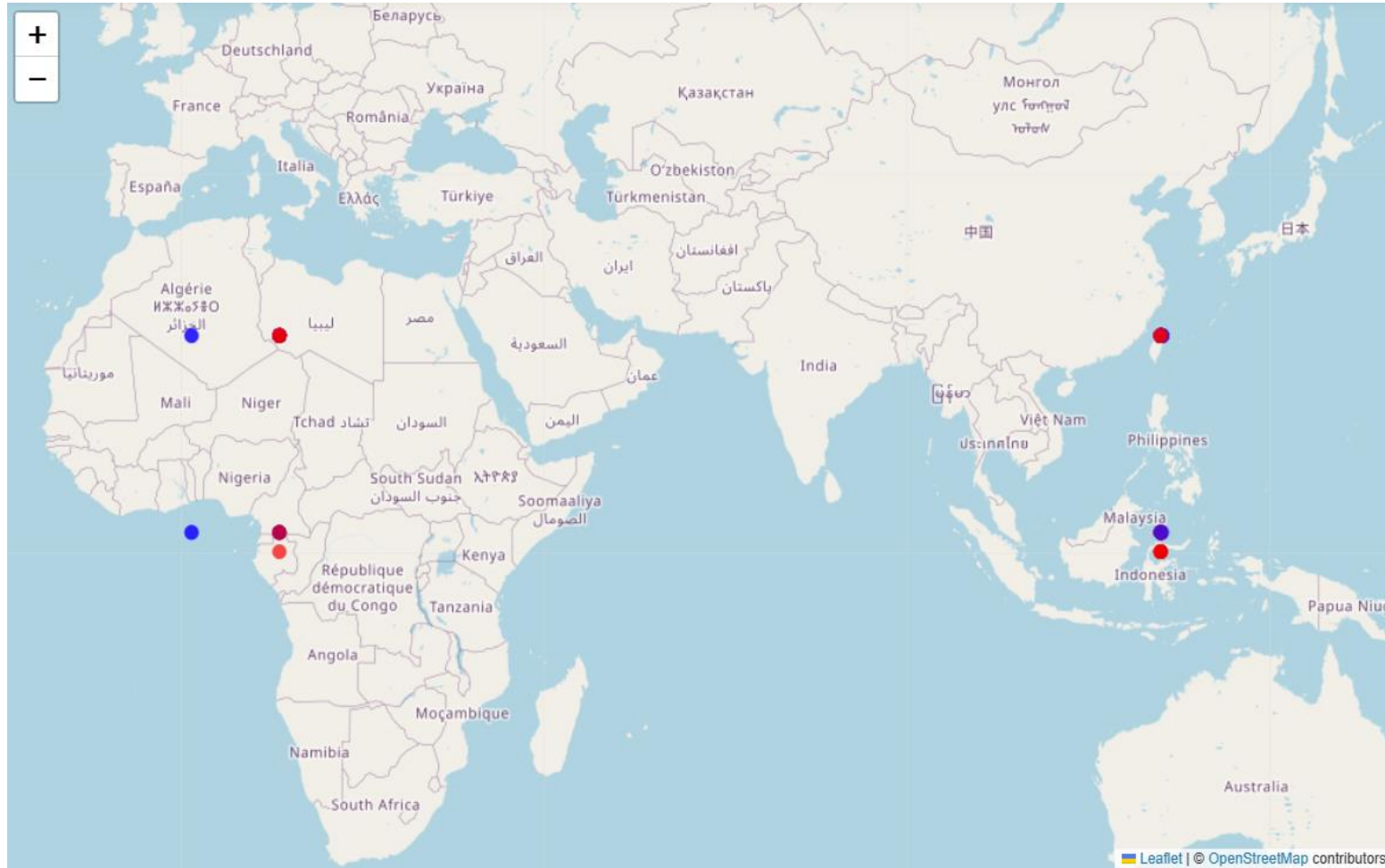
Convenience Stores vs. Price

Number of Convenience Stores vs. House Price

❖ Positive impact; more stores nearby slightly correlate with higher prices

Results and Interpretation

Geographic co-ordinates vs. House Price

❖ Location, by itself, doesn't tell us much about the price; other factors have more effect

Conclusions and Recommendations

Conclusions

❖ Factors impact prices, but correlations are generally weak, suggesting complex interdependencies

❖ Location, by itself, doesn't tell us much about the price; focus on other factors

Recommendations

❑ For Investors, consider properties near MRT stations despite the weak correlation, as they may offer better long-term value

❑ For Policymakers, encourage development of amenities in residential areas to potentially boost property values