

# PREDICTIVE MODELING OF HOUSING PRICES IN MELBOURNE

Author Dijana Damchevska | Supervisor Igor Lazov, PhD | Collaborators Marija Stankova Medarovska, PhD Filip Makraduli, MSc

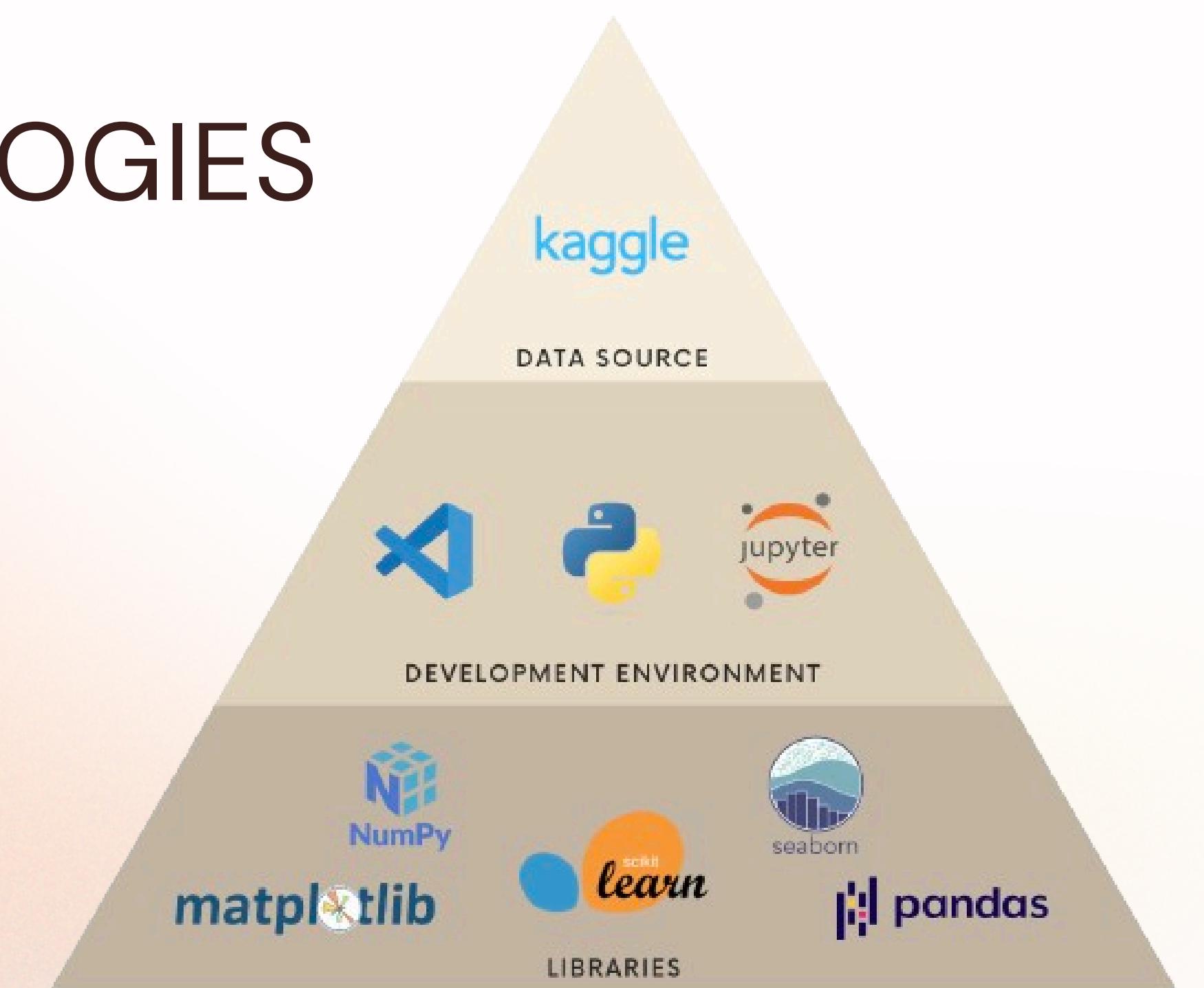
## INTRODUCTION

In the dynamic real estate market, predicting housing prices accurately is essential for buyers, sellers, and investors alike. This research utilizes machine learning algorithms to offer estimates and actionable predictions, transforming our understanding of property values.

## OBJECTIVE

The objective is to utilize Linear Regression, Decision Trees, and Random Forests to predict housing prices in the city of Melbourne, Australia. This study aims to identify the most effective model, providing a tool for stakeholders in the real estate market.

## TECHNOLOGIES & TOOLS



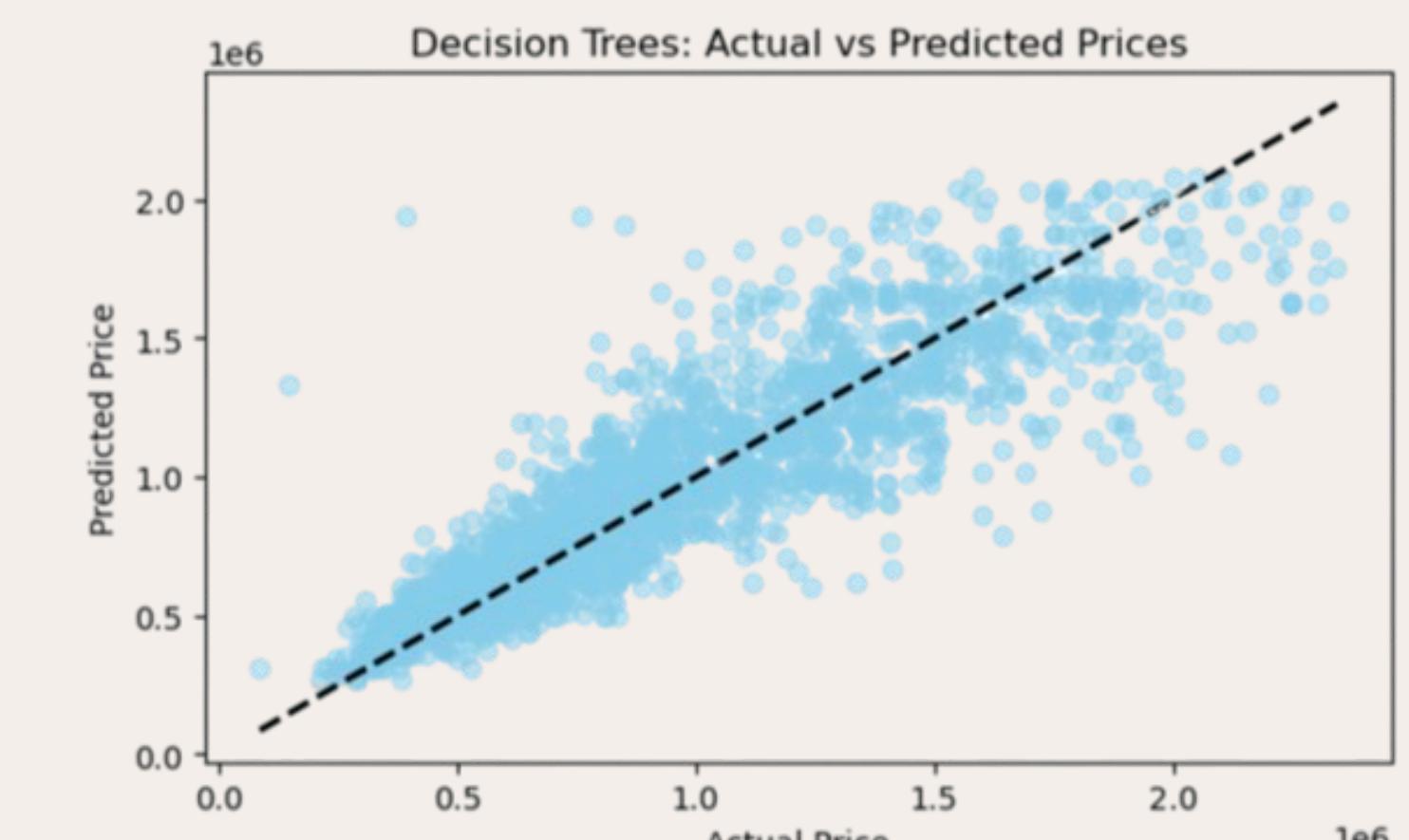
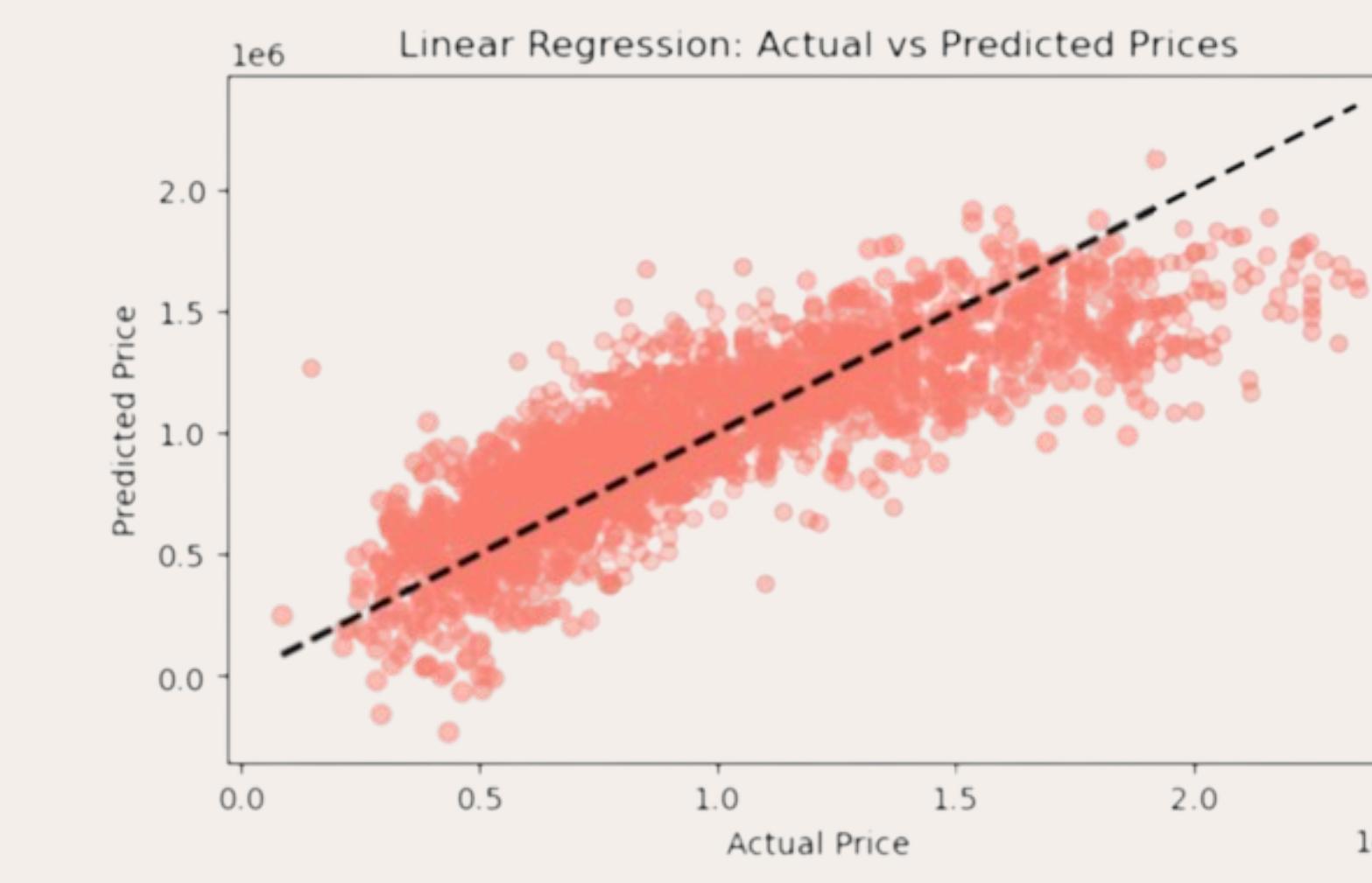
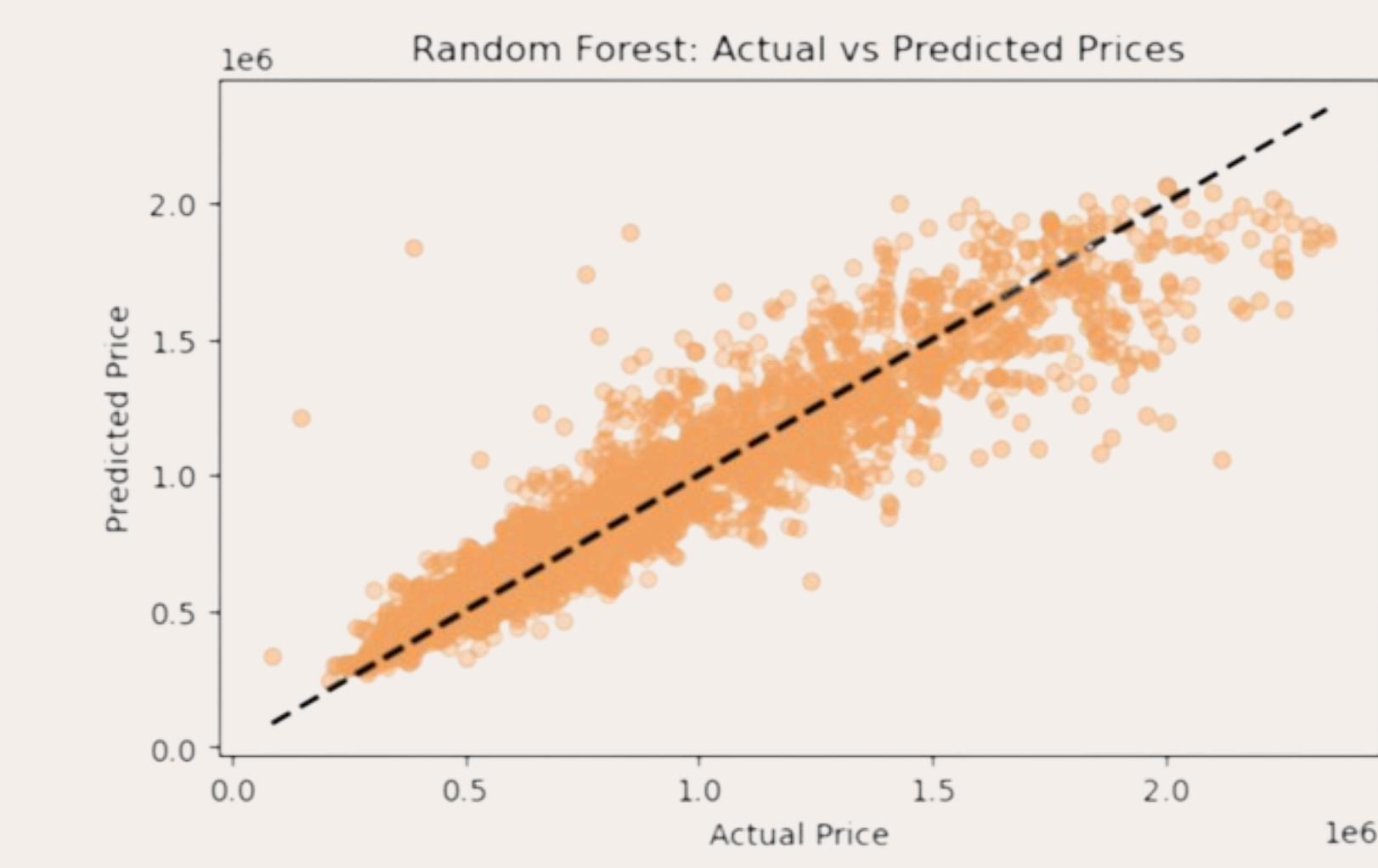
## METHODOLOGY

- Data Collection
- Data Analysis
- Data Cleaning
- Feature Engineering
- Data Visualization
- Model Building
- Evaluation

## FINDINGS

The Random Forest model showed the highest performance with an R<sup>2</sup> score of 84%. This model demonstrates strong potential for predicting housing prices in Melbourne, outperforming the other two models.

## ANALYSIS



## CONCLUSION

The findings emphasize the transformative potential of machine learning in the real estate industry. By utilizing supervised machine learning algorithms like Random Forests, we can provide stakeholders with insights into market trends and underlying patterns, leading to reliable predictions. This allows for well informed investment choices, contributing to a data driven future in the housing market.

