

## Housing Price Prediction Using Machine Learning Algorithms: The Case of Melbourne City, Australia

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**Abstract :** House price forecasting is a main topic in the real estate market research. Effective house price prediction models could not only allow home buyers and real estate agents to make better data-driven decisions but may also be beneficial for the property policymaking process. This study investigates the housing market by using machine learning techniques to analyze real historical house sale transactions in Australia. It seeks useful models which could be deployed as an application for house buyers and sellers. Data analytics show a high discrepancy between the house price in the most expensive suburbs and the most affordable suburbs in the city of Melbourne. In addition, experiments demonstrate that the combination of Stepwise and Support Vector Machine (SVM), based on the Mean Squared Error (MSE) measurement, consistently outperforms other models in terms of prediction accuracy.

**Keywords :** house price prediction, regression trees, neural network, support vector machine, stepwise

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