

HOUSE PRICE PREDICTION

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**INTRODUCTION**

* **Business Problem Framing**

Houses are one of the necessary needs of each and every person around the globe and therefore housing and real estate market is one of the markets which is one of the major contributors in the world’s economy. It is a very large market and there are various companies working in the domain. Data science comes as a very important tool to solve problems in the domain to help the companies increase their overall revenue, profits, improving their marketing strategies and focusing on changing trends in house sales and purchases. Predictive modelling, Market mix modelling, recommendation systems are some of the machine learning techniques used for achieving the business goals for housing companies. Our problem is related to one such housing company.

A US-based housing company named Surprise Housing has decided to enter the Australian market. The company uses data analytics to purchase houses at a price below their actual values and flip them at a higher price. For the same purpose, the company has collected a data set from the sale of houses in Australia. The data is provided in the CSV file below.

The company is looking at prospective properties to buy houses to enter the market. You are required to build a model using Machine Learning in order to predict the actual value of the prospective properties and decide whether to invest in them or not. For this company wants to know:

1. Conceptual Background of the Domain Problem

The Problem is related to the back ground of statistic, Machine Learning and python.

3.Describe the domain related concepts that you think will be useful for better understanding of the project.

* **Motivation for the Problem Undertaken**

My objective was to build a model with high accuracy and with less error.

* **State the set of assumptions (if any) related to the problem under consideration**

I haven’t taken any.

* **Hardware and Software Requirements and Tools Used**

I have used Jupyter notebook as the code editor and python as code language

**Model/s Development and Evaluation**

* **Identification of possible problem-solving approaches (methods)**

I followed the simple way of clearing the null values and then normalising the data and finally we got the model

* **Testing of Identified Approaches (Algorithms)**

Linear Regression

Random Forest

adaBoost

LGBMRegressor

Ridge

Lasso

* **Key Metrics for success in solving problem under consideration**

RMSE score

* **Interpretation of the Results**

We are getting a good output and our prediction is having \*&% of accuracy and with least error.

**CONCLUSION**

* **Learning Outcomes of the Study in respect of Data Science**

This Project is having a lot of take away. One can learn how to build and analyse the data and get a good predictive model.

* **Limitations of this work and Scope for Future Work**

I didn’t find any limitation for this work.