

Problem Statement and Goals

Real Estate Indicator

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Table 1: Revision History

Date	Developer(s)	Change
Jan 26, 2023	Runze Zhao	First draft

1 Problem Statement

1.1 Problem

Real estate market has always been an important factor to the economy. During the ongoing recession period, people pay more and more attention to the change of housing market; Especially for the ones who are going to sell or buy a house. The price tags on the properties are commonly based on the nearby sold houses. This approach lacks of scientific measurements. Sellers are buyers are very limited to the tools or models that could predict the price in the near future. The demand for such tool is growing rapidly. There are many regression techniques used in machine learning could be used to predict future house price based on the historical data sets. Each one of them could output different predictions, which can be used by related stakeholders when they sell or buy a house.

1.2 Inputs and Outputs

1.2.1 Inputs

- Data sets of historical sold houses

1.2.2 Outputs

- Prediction of multiple linear regression model
- Prediction of LASSO regression model
- Prediction of gradient boosting regression model

1.3 Stakeholders

- Real estate brokers and agents
- House buyers and sellers

1.4 Environment

The software can be deployed on any OS

2 Goals

The software will give people better prediction of house prices in the near future

3 Stretch Goals

Find which regression model has the most accurate prediction