

From: Sreenu Chandran, Pooja Choudhary and Ning Li

In the recent past our sales revenues have started to take a hit due to some bad and hasty decisions from our team of realtors. We have lost two major sure shot projects in the last one month to our competitor Iowa Homes, who have also been growing at a tremendous rate and have surpassed us in the last quarter. In the last board meeting with, our investors raised their concerns on the decreasing sales revenue and have given us an ultimatum to revive our business within the next 3 months.

We believe one of the main reason for our decline is that our current metrics of price estimation are outdated. Further, our current model uses the data from 1990s and People's preferences have changed over time and our estimator does not take these into account. Because people in Iowa are very price sensitive, it is extremely pertinent that we get our price estimation right.

We thus feel, it is extremely important to update our price estimation model. One of the biggest challenge to update the model is to collect data in such a short time duration. But fortunately, the open data source,"kaggle data sets" lists the pricing of the houses in Ames, Iowa based on 79 explanatory variables describing different features of the house like number of rooms, number of bathrooms, garage, neighbourhood and many more. We feel that the data is quite comprehensive and it covers all the aspects of properties valuation. Thus, in the interest of time, we feel that we can proceed with this dataset.

We intend to build a price model using different approaches like linear regression model with various transformations, Neural Network and Random Forest models.

We are extremely confident that this project will help in turning around our business to a profitable one again.