**Innovation**

Abstract:

The housing market plays a pivotal role in the global economy, impacting both individuals and businesses alike. Accurate prediction of house prices is essential for various purposes, such as real estate investment, mortgage lending, and urban planning. Traditional methods of house price prediction often rely on simplistic models that fail to capture the complexity and nuances of the real estate market.

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Aim and Objective:

* People looking to buy a new home tend to be more conservative with their budgets and marketstrategies.
* This project aims to analyse various parameters like average income, average area etc. andpredict the house price accordingly.
* This application will help customers to invest in an estate without approaching an agent.
* To provide a better and fast way of performing operations.
* To provide proper house price to the customers.

Proposed System:

Linear Regression is a supervised machine learning model that attempts to model a linear relationship between dependent variables (Y) and independent variables (X). Every evaluated observation witha model, the target (Y)’s actual value is compared to the target (Y)’s predicted value, and the major differences in these values are called residuals. The Linear Regression model aims to minimize the sum of all squared residuals. Here is the mathematical representation of thelinear regression:

Factors that Affect House Pricing:

In order to predict house prices, first we have to understand the factors that affect house pricing.

* Economic growth.
* Unemployment.
* Interest rates.
* Consumer confidence.
* Mortgage availability.
* Supply.

ADVANTAGE OF LSTM OVER OTHER MODELS:

Result:

Random forest is an algorithm which can be used both for classification and regression. Random forest models are constructed by using a collection of decision trees based on the training data. Instead of taking the target value from a single tree, the Random forest algorithm makes a prediction on

Conclusions:

The research question for this study is to study how well house prices can be predicted by using k-Nearest neighbour and Random forest regression. In this study we have found that the Random forest regression algorithm performs better at predicting house prices than the k-Nearest neighbour algorithm.