Predicting house price in machine learning

 AI

Problem definition :

   First we predict the values in y using the values in x . Then we compare the actual prices and predicted prices by using scatter plot. Then we find the r square error and mean square error between them . If the errors is less enough then we proceed for testing of the model since the training phase is over.

PROBLEM UNDER CONSIDERATION:

   In India, an inadequate amount of work has been done for valuation in real estate [2]. As a result, sellers use this to their advantage and escalate the prices. Thus, there is a biased procedure to purchase residential property in India as there is no standardized list to aid potential buyers in making a viable buying decision. A typical man cannot contemplate the different market patterns and their impact on the property costs in detail [2]. Hence, a device that understands these patterns and the impact of different parameters on property costs is required. Different machine learning algorithms can be utilized to foresee future estimates. We require to build a model that predicts future housing prices considering precision accuracy and different error metrics.

Problem Statement:

   Mean Squared Error(MSE)   (1) Root Mean Squared Error (RMSE)   (2) Mean Absolute Error(MAE)   (3)   Mean Absolute Percentage Error(MAPE)

(4)   Where,   i = Variable n= Number of non-missing data points y_i = actual observations time series $ŷ_i$ = estimated time series

Decision tree:

  Approm note

DECISION TREE ---- Decision Tree is a Supervised learning technique that is used for classification and Regression problems, but mostly it is preferred for solving Classification problems. It is a tree-structured classifier, where internal nodes represent the features of a dataset, branches represent the decision rules and each leaf node represents the outcome [3]. There are various algorithms in Machine learning, so choosing the best algorithm for the given dataset and problem is the main point to remember while creating a machine learning model.

Random Forest:

   RANDOM FOREST-----   Random forests for regression are formed by growing trees, are determined on a random vector. The output values are algorithmic, and we consider that the training set is independently drawn from the distribution of the random vector X and Y . The random forest predictor is formed by taking the moderate over k of the trees. The number of trees in the forest are created randomly and can go to infinity

Conclusion:

   Satisfaction of customers by expanding the exactness of their decision and diminishing the danger of putting resources into a home. The sales prices will be calculated with better accuracy and precision. The system will satisfy customers by providing accurate output and preventing the risk of

investing in the wrong house. That would make it even easier for the people to select the houses that best suits their budgets.