Problem Statement: Develop a House Price Prediction System

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House Price Prediction System

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Technical Papers

Abstract:

Machine learning plays a major role from past years in image detection, spam reorganization, normal speech command, product recommendation and medical diagnosis. Present machine learning algorithm helps us in enhancing security alerts, ensuring public safety and improve medical enhancements. Machine learning system also provides better customer service and safer automobile systems. In the present paper we discuss about the prediction of future housing prices that is generated by machine learning algorithm. Housing price keep changing in day in and day out and sometimes are hyped rather than being based on valuation. Here we aim make our evaluation based on every basic parameter that is considered while determining the price.

1.Introduction:

Buying a house is a stressful thing. Buyers are generally not aware of factors that influence the house prices. Many problems are faced during buying a house. Hence real estate agents are trusted with the communication between buyers & sellers as well as laying down a legal contract for the transfer. This just creates a middle man & increases the cost of houses. Buyers believe that buying a house is depend on the square foot area, neighborhood, the number of bedrooms. But it depends upon many factors such as number of story's, area outside the house, rooms on one floor. Our project is machine learning app, based on certain specifications of your future home it will try to guess the most accurate price. Suppose you have a house & you want to sell it. Through House Price Prediction project, you can predict the price from previous sell history. We make this prediction using Machine learning. It provides information such as BHK, balcony, location, bathrooms, area.
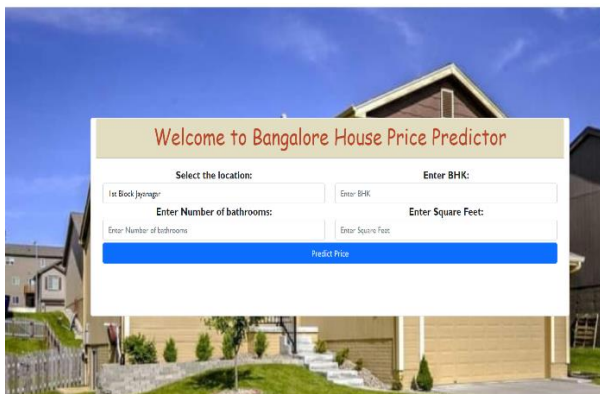
2.Literature Survey:

First we have investigated various papers and discussion on machine learning for house price prediction.

1. The title of the papers is house price prediction is on machine learning and neural networks, the description of the paper is minimum error and maximum accuracy.
2. Next title of the paper is Hedonic models based on price data from Belfast infer that submarkets and residential valuation this model is used to identified over a wider spatial scale and implications for the evaluation process related to the selection of comparable evidence and the quality of variables that the values may needed.
3. The title of the paper is understanding recent trends in house prices and home ownership in this paper they used feedback mechanism or social epidemic that encourages a view of housing as an important investment in the market

3.Tools Used:

1. Machine learning : Machine learning is a subfield of artificial intelligence, which is broadly defined as the capability of a machine to imitate intelligent human behaviour.
2. Artificial intelligence : Artificial intelligence is the simulation of human intelligence processes by machines, especially computer systems. Specific applications of AI include expert systems, natural language processing, speech recognition and machine vision.
3. HTML:
   HTML (Hypertext Markup Language) is the code that is used to structure a web page and its content. For example, content could be structured within a set of paragraphs, a list of bulleted points, or using images and data tables.
4. Anaconda: Anaconda is a distribution of the Python and R programming languages for scientific computing (data science, machine learning applications, large-scale data processing, predictive analytics, etc.), that aims to simplify package management and deployment.

4.Web Page:

5.How it works ?:

First step was to collect the data. We get dataset from Kaggle website. Then we trained the model with the help of machine learning algorithm which in this case is linear regression. Based on generated graphs we predict the cost of the house.

6.Benefits:

- Prediction house prices are expected to help people who plan to buy a house so they can know the price range in the future, then they can plan their finance well.
- In addition, house price predictions are also beneficial for property investors to know the trend of housing prices in a certain location.

7.Future Improvement:

We will include latitude, longitude & elevation of house in system to predict house price with more accuracy.

8.Conclusion:

1. We successfully deign the House Price Prediction system. With the help of HTML, CSS we design the web page & the ML code binding with this page.
2. This system is worked as middle man. In other word as real estate agent which can helps people to find their dream house.
3. User can just need to put their parameter & quick result may they get. Not only house buyers but also house sellers can use this site for selling their house.

9.References:

- Review on House Price Prediction through Regression Techniques Puneet Tiwari1 , Varun Singh Thakur2 1M.tech Scholar, 2Assistant Professor 1,2Rewa Institute of Technology, Rewa M.P.
- House Price Prediction Using Machine Learning and Neural Networks. Publisher: Ayush varma, Abhijit Sarma, Sagar doshi, Rohini Naira. **Date Added to IEEE *Xplore*:** 27 September 2018
- Hedonic modelling, housing submarkets and residential valuation, by A,S.Adair, J.N.Berry, W.S.McGreal published on: 07 Feb 2011
- understanding recent trends in house prices and home ownership, by Robert J. Shiller. Date of publish: Oct 2007