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The property sector has a considerable impact on economic growth through its effect on investments, infrastructure development, and individual financial security. In such a scenario, the capacity to establish correct property values becomes critical for buyers, sellers, and real estate practitioners who depend on sound data to inform their financial decisions. Conventional valuation methods, which are largely manual, tend to be slow, inconsistent, and subject to personal judgment.

To address these constraints, this project introduces a machine learning-driven method for house price estimation. The system will automate and optimize the process of estimating real estate prices through data-driven methods. With the use of past and present property data, it is intended to provide accurate and reliable price estimates with less human interference. The use of sophisticated algorithms by the model guarantees enhanced precision and a more unbiased view, eventually optimizing the whole assessment process.

This framework follows a supervised machine learning approach that incorporates regression-based algorithm that is Linear Regression. These models are trained on important data attributes like geographical context, property size and available amenities. The development cycle involves some important phases beginning from data acquisition from trusted sources, followed by data preprocessing where the raw information is cleaned, normalized, and refined for improved model performance. The processed data is then utilized to train the machine learning models, enabling them to recognize significant patterns and relationships. Once trained, the system can predict housing prices based on input parameters provided by the user. For reliability purposes, the model's performance is tested using conventional metrics like the R² Score.

The system has a number of advantages to offer. It provides increased accuracy and operational efficiency by reducing human bias and providing quick estimations based on tangible data. It is adaptable enough to be used across various housing markets with suitable datasets and can be implemented using an easy-to-use web interface. The method also proves to be cost-effective by decreasing the reliance on manual valuation services, which are usually costly and time-consuming.

Nonetheless, the success of this solution heavily depends on the accuracy of the data it is given. If the datasets are incomplete or obsolete, the accuracy of the predictions would be lost. Even the unpredictability of the market resulting from unforeseen economic shocks or policy shifts might act as a short-term obstacle to the model's reliability. A further factor is the computational overhead involved in training sophisticated models, which might take substantial computing power.

In summary, the suggested machine learning-based housing price estimation system offers a futuristic and effective alternative to traditional appraisal procedures. By using objective, data-driven approaches, the system enables equitable and well-informed real estate transactions. While some limitations are present, including reliance on data quality and processing capacity, the solution is still scalable and has room for future enhancement. Future developments could involve the integration of artificial intelligence-based trend prediction software and interactive geospatial visualizations, making it even more useful. This project is part of the larger trend toward intelligent automation in real estate and helps facilitate more strategic decision-making within the field.