

Residential Valuation Intelligence System

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Abstract

Residential Valuation Intelligence System (RVIS) is a smart assistant, launched into the dynamic real estate market, in that it helps revolutionize by predicting house prices very accurately. This makes for quick and informed decisions in a very changing market. It involves the preprocessing of data and deriving features to identify the important determinants in the first step, followed by building advanced predictive models, namely Elastic Net, Kernel Ridge, Random Forest, XGBoost, and Gradient Boosting, all fine-tune their performance. The models are built in a user interface that is easy to use, and they detail the insights in the market. The intention is to present a predictive model that is very accurate in the forecasting of price changes. It calculates the performance of the system based on some metrics like MAE, MSE, and R-squared which reflect the precision and reliability of the model. This highlights how proper implementation, testing, and validation will help to guarantee that the system is robust and reliable. The system is a true game-changer in the real estate industry, given that it is a unique tool for providing stakeholders with strategic pricing and decision-making information support to maximize value for sellers, buyers, and agents with data-driven transactions. This really does represent a new era when it comes to data-driven decision-making in real estate. This process really does illustrate how important intensive testing and validation are in the creation of robust and reliable technology solutions.