

Research Report on Data Analytics, Data Science, and AI in Advanced Regression for House Price Prediction

This report explores the theoretical foundations of using Data Analytics, Data Science, and Artificial Intelligence (AI) with advanced regression techniques for predicting house prices.

Key Terms

Data Analytics, Data Science, AI, and Advanced Regression involve statistical modeling, computing, and predictive algorithms applied to real estate valuation. Advanced regression methods such as Polynomial Regression, Ridge Regression, Lasso Regression, Random Forest, and XGBoost are vital for capturing non-linear and complex patterns.

Role in Real Estate

These techniques assist in evaluating property values, analyzing market trends, and supporting investment decisions in real estate.

Feature Selection & Hyperparameter Tuning

Feature selection improves model generalization, while hyperparameter tuning enhances predictive accuracy by optimizing model configurations.