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E-Commerce Product Recommendation System

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Abstract: *This paper presents an in-depth analysis of machine learning models applied to eCommerce product recommendation systems. The primary goal is to enhance recommendation accuracy by employing and comparing multiple machine learning techniques, including Artificial Neural Networks (ANN), K-Nearest Neighbors (KNN), Random Forest, Gradient Boosting, and boosting methods such as AdaBoost and XGBoost. These models are evaluated based on key metrics such as Mean Squared Error (MSE), Root Mean Squared Error (RMSE), and R-squared (R^2). Our findings indicate that ensemble methods like XGBoost provide superior accuracy, making them suitable for real-world applications in personalized recommendations*

Keywords: eCommerce, Recommendation System, Machine Learning, Collaborative Filtering, AdaBoost, XGBoost

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