

Review of: "Bank Customer Churn Prediction Using SMOTE: A Comparative Analysis"

Syed Hasan¹

¹ King Abdul Aziz University

Potential competing interests: No potential competing interests to declare.

The paper provides a comprehensive exploration of addressing customer churn in today's dynamic market through advanced machine learning techniques. It effectively addresses the challenge of imbalanced datasets by employing Synthetic Minority Over Sampling Technique (SMOTE) and feature selection using Genetic Algorithm (GA). The evaluation of four classification algorithms, namely Random Forest (RF), K-Nearest Neighbor (KNN), Artificial Neural Network (ANN), and Adaboost, highlights KNN's superior performance, achieving 96% accuracy, precision, and F-measure. The comparison with existing models using the same dataset corroborates the efficacy of the proposed strategy, demonstrating its superiority. The study not only contributes to the literature on customer churn prediction but also underscores the practical applicability of SMOTE and GA in enhancing model performance. However, minor modifications could include providing more context on the dataset used, detailing the selection criteria for the algorithms, and discussing potential limitations or future research directions. Overall, the paper presents a robust methodology and significant findings deserving acceptance, with minor enhancements to further enrich the discussion and contextualization.