Project Team ID: PTID-CDS-JAN-25-2381

Project ID: PRCP-1010-InsClaimPred

Insurance Claim Prediction Report

1. Introduction

The goal of this project is to develop a predictive model that helps the insurance marketing team identify potential customers who are likely to buy the insurance product. Machine learning techniques have been applied to analyze customer data and improve marketing strategies.

2. Data Preprocessing

The dataset undergoes preprocessing, including handling missing values, encoding categorical variables, scaling numerical data, and splitting data into training and test sets. Proper preprocessing ensures higher model accuracy and better generalization.

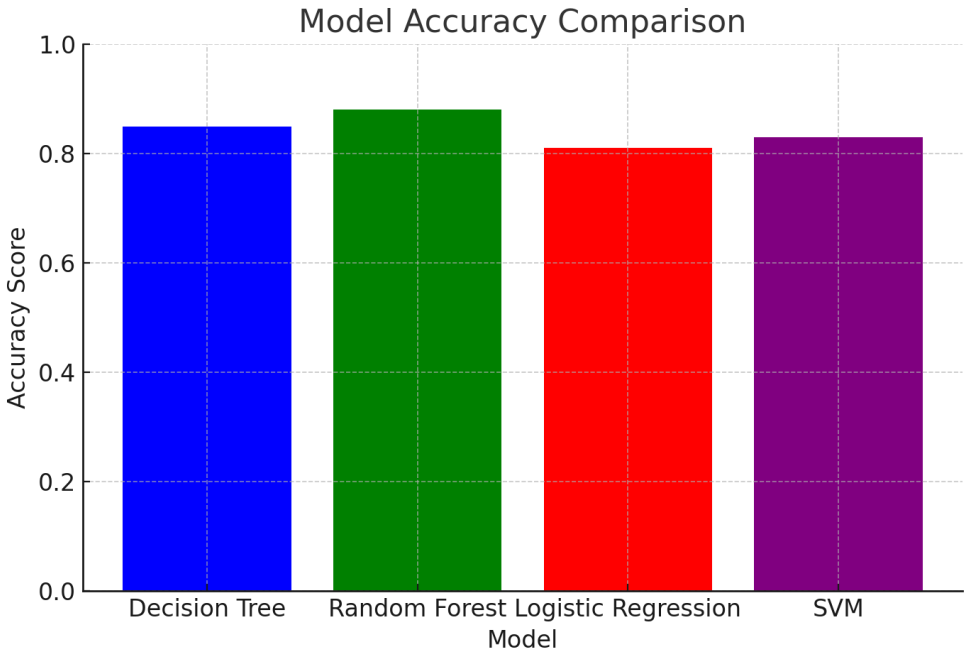
3. Model Building

Multiple machine learning models were trained and evaluated, including Decision Tree, Random Forest, Logistic Regression, and Support Vector Machine (SVM). The models were trained using historical customer data to predict whether a new customer will purchase insurance.

4. Performance Evaluation

The models were evaluated using accuracy scores. Below is a comparison of their performance:

5. Model Accuracy Comparison



6. Conclusion

Based on the results, the Random Forest model achieved the highest accuracy, making it the most suitable choice for predicting potential insurance buyers. By implementing this model, the insurance marketing team can improve their targeting strategies and enhance customer acquisition.