

CRM-Driven AI for Customer Retention: Model Deployment and Chatbot Integration

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Abstract: *In the realm of customer relationship management (CRM), the integration of artificial intelligence (AI) has become a transformative force, offering innovative solutions to enhance customer retention strategies. This study explores the deployment of supervised machine learning algorithms, specifically Random Forest and XGBoost, for the task of churn prediction. Simultaneously, it examines the role of rule-based chatbot frameworks in facilitating real-time customer engagement. Through empirical experimentation using synthetic CRM datasets, the research demonstrates that the proposed hybrid system exhibits robust predictive performance and presents significant implications for automated, data-driven CRM systems*

Keywords: Customer Relationship Management, Churn Prediction, Artificial Intelligence, Random Forest, XGBoost, Chatbot Systems, Predictive Modeling

