

# Role of Machine Learning in Enhancing Customer Relationship Management

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**Abstract:** *Customer Relationship Management (CRM) systems have evolved from simple data storage platforms to intelligent decision-support systems. With the rapid growth of digital interactions, organizations generate vast volumes of structured and unstructured customer data. Traditional CRM systems lack predictive capabilities, limiting their strategic effectiveness. This study uses secondary data analysis of peer-reviewed journal articles, academic books, and industry reports to examine the role of Machine Learning (ML) in transforming CRM systems. The findings indicate that ML enhances customer segmentation, churn prediction, personalization, and sales forecasting, thereby improving customer retention and profitability. However, challenges such as data quality, privacy concerns, ethical AI governance, and implementation complexity remain significant. The study identifies key research gaps and highlights managerial implications for integrating ML into CRM strategies. The paper concludes that ML-driven CRM represents a strategic transformation essential for competitive advantage in the digital economy.*

**Keywords:** Customer Relationship Management, Machine Learning, Predictive Analytics, Customer Segmentation, Churn Prediction, Artificial Intelligence

