

Author(s)	Aim of the study	Method
Jamjoom (2021)	Predict and analyze customer churn by identifying customers likely to switch services and understanding the key factors affecting their behaviour, using data mining and machine learning techniques to improve customer retention.	Data mining and machine learning techniques (Decision Tree). CRISP-DM framework
Henrys (2021)	This study explains how predictive analytics can be used in business to analyze historical data and improve decision-making by predicting future outcomes such as customer behavior, churn, and segmentation.	Statistical Modeling and Machine Learning (Regression Techniques, Linear Regression Model, Logistic Regression)
Gattermann-Itschert & Thonemann (2022)	This study aims to develop a churn prediction model for B2B wholesale and apply it.	Field Experiment, Machine Learning Model, Logistic Regression, Support vector machines (SVMs), Random forests
Manzoor et al. (2024)	To systematically review machine learning methods for customer churn prediction and provide practical business recommendations.	Systematic literature review of 212 studies (2015–2023).
Chang et al. (2024)	To develop an accurate and explainable churn prediction model using machine learning and explainable AI techniques	Logistic regression, Decision Tree, Random Forest, Naive Bayes, KNN
Afzal et al. (2024)	To predict customer churn in the telecommunications sector using machine learning models and to review AI applications across e-commerce, healthcare, and telecom industries.	Data preprocessing and missing value imputation Exploratory Data Analysis (EDA) Models: Decision Tree, Random Forest, KNN, XGBoost Evaluation metrics: Accuracy, Precision, Recall, F1-score, AUC-ROC

Ahmed et al. (2024)	According to article it compares different machine learning models to accurately predict customer churn in retail banking and identify the most effective approach for improving customer retention strategies.	Machine learning models, including Logistic Regression, SVM, and Random Forest.
The Peacan Team (2024)	The study shows how predictive AI can identify customers at risk of churn and enable targeted strategies to reduce churn and increase customer value.	Predictive AI and Machine learning models
George (2025)	To analyze churn rates across industries and highlight how data-driven, predictive strategies can reduce churn and improve customer retention.	Machine learning models such as Random Forest and predictive analytics/AI models
Sidoewicz & FP Team (2025)	How AI and machine learning can predict customer churn, identify its causes, and prevent customer churn from happening with automated interventions to improve retention and customer experience.	AI and Machine Learning methods
Abdelhady & Mohamed (2025)	The article aims to develop an explainable AI-based churn prediction model and integrate its insights into CRM systems to enable proactive customer retention strategies in the telecommunications industry.	Random Forest, XGBoost, Standardization and Machine Learning Models related to prediction.
Ehsani & Hosseini (2025)	To predict customer churn behavior in internet banking services using feature optimization methods integrated with tree-based classifiers.	Feature reduction (correlation matrix), RFECV feature selection, feature importance analysis; applied within C5.0 Decision Tree, Random Forest, XGBoost, AdaBoost, CatBoost, and LightGBM; GridSearchCV used for parameter tuning.

Imani et al. (2025)	To systematically review recent (2020–2024) ML and DL approaches for customer churn prediction, identifying trends, challenges, and research gaps.	Search across six databases; 240 studies analyzed bibliometrically, 61 studies examined in-depth; qualitative synthesis (no meta-analysis).
Mamun (2025)	To systematically review advancements in machine learning models for customer retention and churn prediction across industries (2015–2025).	112 peer-reviewed studies analyzed; qualitative synthesis of ML techniques, feature engineering, evaluation metrics, and deployment challenges.
Mohaimin et al. (2025)	The study aims to develop an AI-driven predictive churn model integrated with CRM systems to identify customers at risk of leaving and support proactive retention strategies.	Random Forest machine learning model was used as the main predictive algorithm. The study also compared Random Forest with XGBoost, Support Vector Machine (SVM), and Artificial Neural Network (ANN). Data preprocessing techniques, such as SMOTE, were applied to address class imbalance.
Asif et al. (2025)	The study is about to introduce a stable, understandable, and explainable data-driven model, called the XAI model, to accurately predict customer churn in the telecommunications industry, as Machine learning methods often lack predictive power.	1- XAI application method 2- the Boruta technique
Boozary et al. (2025)	To compare traditional and ensemble machine learning models for accurate customer churn prediction and identify the most effective approach.	Experimental comparative analysis using Logistic Regression, KNN, Random Forest, Gradient Boosting (XGBoost) with preprocessing, SMOTE, grid search, and cross-validation.
Fiedler & Maechler (2025)	How AI and generative AI can be used to improve customer satisfaction, retention, and revenue	AI and machine learning models on integrated customer data. Also, generative AI.

	through personalized, predictive customer interactions.	
Zhang (2025)	Predict customer churn in the telecommunications industry by analyzing customer and product attributes using CLV segmentation and machine learning models, and to examine how their interaction improves prediction and supports retention strategies.	Machine learning models like logistic Regression, SVM, and XGBoost, the Elaboration Likelihood Model
Maqbool & Qureshi (2026)	This study aims to review and analyse the application of XAI in customer churn prediction and retention. It evaluates XAI performance and examines how it can upgrade business systems.	1- XAI application method 2- systematic literature review