

# Customer Churn Prediction using Machine Learning

**Sakshat Salekar and Riddhesh Awade**

Student, Department MCA

Late Bhausaheb Hiray S S Trust's Hiray Institute of Computer Application, Mumbai, India

**Abstract:** Companies have to fight hard to lure in new customers from their suppliers. Client retention is a trendy issue for investigation since it directly impacts a business's revenue; early discovery of client churn allows organizations to take proactive steps to retain consumers. Thus, through customer retention programs, all businesses could employ a range of strategies to recognize their clientele early on. Consequently, this study tries to advise on the ideal machine-learning technique for early client churn prediction. All customer information dating back around nine months prior to the churn is included in the data used in this research. Anticipating the reactions of current clients is the aim in order to retain them. Several algorithms, including  $k$ -nearest neighbors, random forest, logistics regression etc have been tested in this work. As theThe aforementioned algorithms had accuracy rates of 78.1%, 82.6%, 83.9%, and 82.9%, respectively. By analyzing these algorithms and debating the best of the four from various angles, we have obtained the most efficient outcomes.

**Keywords:** Customer Churn