

This project focuses on predicting customer churn in the banking and financial services industry, where retaining customers is far more cost-effective than acquiring new ones. Using a real-world dataset of 10,000 customers, the goal is to identify individuals at high risk of leaving the bank by analyzing their demographics, financial behavior, and engagement patterns. By building a neural network completely from scratch and applying proper preprocessing, encoding, and model training techniques, the project demonstrates strong domain knowledge in customer retention analytics, handling imbalanced datasets, and extracting actionable insights—such as the discovery that churn is concentrated among customers aged 40–60. These predictions empower banks to take proactive retention measures, reducing revenue loss and improving customer lifetime value.