The aim of this project is to develop a model which predicts the likelihood of a customer to churn. Analysis was based on bank customer churn data. Different classification algorithms were trained after applying SMOTE to training data to balance the class. From a total of 19 features top 11 features contributing the most in predicting churn were selected using wrapper method. Gradient Boosting Classifier was selected with recall value of 91% and Streamlit application was designed for deployment. The result from test size of 3039 observations showed the cost of false negative (predicting actual churning customer as non-churner) is about 3 times cost of false positive. Based on the same test size and, assumption for cost of retention and cost of losing a customer, more detailed in methods section, using this model helps in an estimated total cost saving of $2351 times retention costs of one customer.