Credit card default prediction

Amith Nair, Master of Science in Computer Science

University of Dublin, Trinity College, 2022

Supervisor: Dr. Bahman Honari

Around the world, credit cards have become one of the most common payment meth-

ods. Customers can now pay at a restaurant, movie theatre, or grocery store with a simple

tap. Banks reward the use of credit cards by giving points for each unit of money spent.

However, there is no guarantee to the banks that credit user will pay back their debts

on time. This puts a huge amount of risk on the banks. The research tries to distin-

guish good customers from bad customers by analyzing the historical data of a customer.

Two main approaches are used for this purpose. The first approach focuses on looking

at the aggregated information of the customer while the second approach looks into the

trends present in the customer's historical information. Both these approaches provide

the probability of a customer defaulting. Later the predictions obtained from both these

approaches are averaged by assigning weights to each approach. The research has used

models like random forest and recurrent neural networks.