# AI Project: Evaluating Bank Customer Churn

**Project Goals and Business Value**

The aim of this project is to predict customer churn, a common business key performance indicator (KPI). Churn is when customers stop using a product, and reducing it is crucial for business success. Using AI to understand factors that influence churn can help define effective business strategies, and it is also one of the goals of the project.

We will implement a machine learning algorithm, Logistic Regression to perform Binary Classification to determine the ‘churn status’ of a customer given a set of features. Additionally, we will compute the Shapley values for our model in an attempt to define what features have the most impact in influencing a customer’s churn status.

**Dataset**

For our project we will be using the ‘[Bank Customer Churn Dataset’](https://www.kaggle.com/datasets/gauravtopre/bank-customer-churn-dataset) which is freely available in Kaggle. The dataset is mock customer data of account holders from the fictional **ABC Multinational Bank** containing around 10,000 samples and 11 features. These features include variables such as: Credit Score, Country of Residence, Gender, Tenure (Years having an account in the bank), etc.

We decided to split our data into a training, validation and test set in the following percentages: 70:10:20, respectively.

**Project Management Framework**

For our project management methodology we have opted to go to a standard Agile methodology focusing on Scrums. We will prioritise features in our development, and work on the most important features first, and adapt if necessary.

**Team Organization and Roles**

Our team is consisted of 2 people only, Martin and Sameera. Considering we are both AIS students with multi-disciplinary skills we have not defined strict roles to each other. Additionally, due to the size of the team and ease of communication we discuss and take our project decisions together.

# Technical Specifications

The entirety of this project can be found on [BankCustomerChurn](https://github.com/martinsejas/BankCustomerChurn) repository.

For our project organization we have implemented the template cookie-cutter [found here](https://drivendata.github.io/cookiecutter-data-science/).