The Chief Retail Officer of the bank noticed a steady increase in the number of inactive users over the years which made her realize that the use of a data-driven solution is necessary to overcome the limitations of the current rule-based approach for monitoring user activity. Considering the nature of the data, you proposed to build a classification model that could accurately predict which customers are likely to turn inactive in the next 3 months.

Task:

1. Describe the approach you would take to provide a solution to the business.
2. Build a model capable to predict inactive users
3. Discuss how you would measure the effectiveness of your solution, and provide recommendations and insights for the business

Data:

The data (***churn\_data.csv***) consists of demographic and behavioral variables. The description of each column in the dataset is provided below.

**CustomerID**: unique customer identification number

**Geography**: customers’ registration region   
**Gender**: Male/Female

**Age**\_**Band**: the range of ages the customer belongs to

**TenureYears**: tenure since the first bank account opening  
**EstimatedIncome**: estimated yearly income  
**BalanceEuros**: total financial assets (savings/deposits)  
**NoProducts**: number of total products the customer holds  
**CreditCardholder**: credit card ownership  
**CustomerWithLoan**: indicator of whether the customer has taken a loan (consumer/mortgage)  
**Digital\_TRX\_ratio**: digital over physical transactions ratio   
**Active** (target): last 3 months customer’s activity (binary)