Objective:

Given a Bank's customer information, can we build a classifier which can determine whether they will leave or not?

Context:

Businesses like banks which provide service have to worry about problem of 'Churn' i.e. customers leaving and joining another service provider. It is important to understand which aspects of the service influence a customer's decision in this regard. Management can concentrate efforts on improvement of service, keeping in mind these priorities.

Data Description:

The dataset contains 10,000 sample points with 14 distinct features such as CustomerId, CreditScore, Geography, Gender, Age, Tenure, Balance etc. Know your data: https://www.kaggle.com/barelydedicated/bank-customer-churn-modeling

Steps and Milestones (100%):

- Setup Environment and Load Necessary Packages (5%)
- Data Preparation (40%)
    - o Loading Data (5%)
    - o Cleaning Data (10%)
    - o Data Representation & Feature Engineering (If Any) (15%)
    - o Creating Train and Validation Set (10%)
- Model Creation (30%)
    - o Write & Configure Model (10%)
    - o Compile Model (10%)
    - o Build Model & Checking Summary (10%)
- Training and Evaluation (25%)
    - o Run Multiple Experiments (10%)
    - o Reason & Visualize Model Performance (5%)
    - o Evaluate Model on Test Set (10%)

Learning Outcomes:

- o Neural Networks for Predictive Analytics
- o Fine-tuning Model
- o Data Preparation
- o Feature Engineering
- o Visualization