Minor Project

Project Name:

Artificial Intelligence June Minor Project

Project Description:

Problem statement: Create an ANN Classification model to predict the Customer Churn of different customers.

Dataset:

https://drive.google.com/file/d/15XJbajKoiCGIgv90S5ZWwC2DeQflQ6gP/view?usp=sharing

Details of features:

The dataset has 14 columns and the feature details are as follows:

1. Row_number: Index field for each customer
2. Customer_ID: unique customer ID for each customer
3. Surname: Surname of each customer.
4. Credit_Score: Customer's credit score
5. Geograpgy: Customer's location
6. gender: gender of customer
7. age: age of customer
8. tenure: the duration of customer association (in yrs)
9. balance: balance amount
10. NumOfProducts: The number of products, customer has bought
11. HasCrCard : whether customer has credit card or not.
12. IsActiveMember : Is customer an active member
13. EstimatedSalary : Estimated Salary of customer
14. Exited : 1(exited) or 0(not exited) – Target Variable

Steps to consider:

1. Remove handle null values (if any).
2. Apply the necessary data preprocessing like
    a. Handling null values
    b. Handling duplicate records
    c. Label Encoding or Dummy variable creation for encoding categorical columns
3. Select x (independent variable) and y (dependent variable) - Exited(1 or 0)
4. Split data into training and test data.
5. Apply the ANN Classification model on the training dataset and generate the predicted value for the test dataset
6. Predict the exited status for test data
7. Compute Classification metrics – confusion Matrix, classification Report.
8. Report the ANN model accuracy.