approve a credit card

**Abstract**

This project aimed to understand people's emotions about approve a credit cardusing machine learning models to , who would be good to approve a credit card request?. The used data in this project is provided by Kaggle, the data is labeled using, status with sklearn library XGboost and KNN was trained and get 95% accuracy.

**Design**

This project is one of the T5 Data Science BootCamp requirements. Data provided by Kaggle has been used in this project. The included approve a credit card in the data ID. Classifying how client approve a credit cardusing machine learning algorithms .

**Data**

The dataset is provided in .csv format. the Dataset provided in .csv format from Kaggle it is 2 table .

1- application\_record.csv,.it contains 438557 ID, each ID has 18 Features .

2- credit\_record.csv .it contains 1048575 ID, each ID has 3 Features.

**Algorithms**

***Feature Engineering***

* Cleaning the text feature by converting to numeric
* Duplicate rows by drop .

***Models***

* because binary classification (metric) uses two model.

**A – XGBoost**

is an optimized distributed gradient boosting library designed to be highly efficient, flexible and portable by training .

* Accuracy : 93%
* Precision : 99%
* Recall: 87%
* F1: 93%

**B - (KNN) K-Nearest Neighbors Algorithm for Regression**

* Accuracy : 68%
* Precision : 99%
* Recall: 36%
* F1: 53%

**Tools**

* Pandas for data manipulation.
* sklearn for modeling.
* Matplotlib for plotting.
* Xgboost for classifier.
* Seaborn for statistical data visualization.