


PROJECT OF WEB DEVELOPMENT		
Student's Code		Deadline
[Groupe 3]		24/04/2025
April 22, 2025		2024-2025
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## Problem Description

In the banking sector, processing credit card applications is a routine but crucial task. Each day, commercial banks receive a large number of applications, many of which are declined due to risk factors such as low income, high outstanding debts, or lack of credit history. Manually reviewing each application is time-consuming, error-prone, and inefficient.

This project addresses the need for a faster and more reliable decision-making process by automating credit risk assessment using machine learning. The goal is to predict whether a credit card application should be **approved or rejected**, based on applicant data.

## Model Used

We developed a **classification model** using machine learning techniques. The key steps included:

- Data cleaning and preprocessing , Exploratory Data Analysis (EDA)
- Model training and evaluation
- Deployment as a Flask web application with:
  - User authentication (login/signup)
  - A prediction form interface
  - A results page displaying the model output

## Dataset Source

The dataset used is the **Credit Card Approval dataset** available from the UCI Machine Learning Repository:

<https://archive.ics.uci.edu/ml/datasets/Credit+Approval>

## Application Links

**Live App:** <https://web-development-group-3-aims-sn.onrender.com>

**GitHub Repository:** [https://github.com/TEYI-JEROME/web\\_development\\_group\\_3\\_aims\\_sn](https://github.com/TEYI-JEROME/web_development_group_3_aims_sn)

## 1 Screenshots of the working application

LOG IN SIGN UP

AIMS

Sign Up

Fossua

djongang.f.a.stella@aims-senegal.org

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SIGN UP

Figure 1: Sign up

LOG IN SIGN UP

AIMS

Log In

Your Email

Your Password

LOG IN

[Forgot your password?](#)

Figure 2: Login

Menu

Dashboard

Prediction

Logout

AIMS

Welcome, Fossua

Start Mode

Credit Card Application Prediction Tool

This application is designed to help financial institutions **make quick and reliable decisions** on credit card applications.

Using **Artificial Intelligence**, our system analyzes the information provided by the applicant (such as **income, employment, debts**, etc.) and predicts whether the application is likely to be **approved** or **declined**.

This allows you to:

- Save time processing applications
- Reduce human errors
- Improve the overall customer experience

Figure 3: Welcome page

Input Guide: What Values You Can Enter

- Gender: Enter ☐ for Gender or ☐ for Female
- Age: Your age in years (e.g.  33,  33.5)
- Debt: Current debt amount in thousands (e.g.  0,  33.5)
- Years Employed: Years employed (e.g.  33,  33.5)
- Prior Default: Enter ☐ if yes, ☐ if not
- Employed: Enter ☐ if currently employed, ☐ if not
- Income: Your yearly income (e.g.  33000,  33000.5)

Enter Data for Prediction

Gender:

Age:

Debt:

YearsEmployed:

PriorDefault:

Employed:

Income:

Predict

Logout

Figure 4: Input data

Enter Data for Prediction

Gender:

Age:

Debt:

YearsEmployed:

PriorDefault:

Employed:

Income:

Predict

Logout

Figure 5: Input

Prediction Result

☒ This loan can be approved

[Try Again](#) [Logout](#)

Figure 6: Prediction Result