# MSDS_1:2/ PGDDS_1:2

# CSC8203: Applied Machine Learning

**Take home EXAM**

**Question: Credit Card Fraud Detection**: [ within your groups]

In this study, you are required to develop a machine learning model to detect fraudulent credit card transactions.

Assess the model's performance in terms of precision, recall, and F1-score.

Dataset: You can use the Credit Card Fraud Detection dataset available on Kaggle for this task.

Dataset url: https://www.kaggle.com/datasets/mlg-ulb/creditcardfraud

Remember to perform data preprocessing, feature engineering, model selection, and evaluation for this prolem.

Additionally, ensure that you have a clear understanding of the problem, choose appropriate algorithms, and present your results effectively in your report.

You are free to you any Machine Learning algorithm of your choice but you must clearly explain it in your report.

**What to handle in:**

1. A detailed report of your implementation including a step by step data cleaning process, model selection, implementation as well as the evaluation metrics
2. The implementation code file. These should be zipped using your group name. For example, group1_exam.zip/rar
3. You will be required to present/defend your work on a date that will be communicated after submission.

Deadline: The deadline for both this take home exam and the coursework is Sunday 12th November 2023. You are required to submit your work to nkimbugwe@cit.ac.ug . Only one member of the group is required to submit on behalf of the group but can cc all other members for confirmation that he/she sent the work.

**Wish all the best**