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## Project Proposal

### 1 Project title

Our project title is "Credit Card Fraud Detection using GANs for Data Augmentation".

### 2 Team

Our team is made up of four people: Cátia Teixeira, Henrique Ribeiro, Ian Karkles and Vitor Pereira.

### 3 Dataset

The dataset that we will be using is "Credit Card Fraud Detection". The dataset was found in <https://www.kaggle.com/datasets/mlg-ulb/creditcardfraud>

### 4 Project idea

The main goal that we want to accomplish is to develop and train a robust model for fraud detection. We intend to adapt several state-of-art techniques, in the field of Generative Adversarial Networks (GANs), generating synthetic data to address the problem of data imbalance in this specific domain.

### 5 Software

The software that we will be using is Python.

### 6 Papers

To accomplish our goal, we intend to consider the following papers:

- [www.sciencedirect.com/science/article/pii/S0957417423006462](http://www.sciencedirect.com/science/article/pii/S0957417423006462)
- [www.arxiv.org/pdf/2109.12546.pdf](http://www.arxiv.org/pdf/2109.12546.pdf)
- [www.ieeexplore.ieee.org/abstract/document/9206844](http://www.ieeexplore.ieee.org/abstract/document/9206844)
- [www.mdpi.com/2504-4990/5/1/19](http://www.mdpi.com/2504-4990/5/1/19)