# CREDIT CARD FRAUD PREDICTION

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# BUSINESS OBJECTIVE

The objective is to minimize the financial losses due to credit card fraud by accurately identifying fraudulent transactions in real-time or near-real-time.

# HOW WILL THE SOLUTION BE USED

- The machine learning model will be integrated into the existing transaction processing system to flag or block suspicious transactions for further review or immediate action.

# HOW SHOULD THE PERFORMANCE BE MEASURED?

- Due to the imbalanced nature of the dataset, accuracy will not be an effective method. I will probably use other measures such as AUC-ROC, precision, recall, F1 Score.

# WHAT WOULD BE THE MINIMUM PERFORMANCE NEEDED TO REACH THE BUSINESS OBJECTIVE?

- This will be communicated thoroughly with the professor. I would say that setting a high Recall might be important to catch most of the fraudulent transactions. But I have to be careful that a too high of a recall may lead to many false positives. Either way, I will have valuable insights from the Professor directly.

# LIST THE ASSUMPTIONS MADE SO FAR AND VERIFY

- Assumption: The metrics used for evaluating the model (e.g., precision, recall, F1-score) are appropriate and aligned with business objectives.
- Verification: I will confirm this further if the above mentioned metrics are appropriate for the specific problem.
- Assumption: The data has been accurately recorded and doesn't contain errors or inconsistencies that could mislead the model.
- Verification:  I will inspect the dataset and find if there are any errors or inconsistencies.

# PLACE I GOT THE DATA FROM

- I obtained the data from Kaggle. Link to the dataset: https://www.kaggle.com/datasets/mlg-ulb/creditcardfraud

# MORE ON DATA

- The data initially can be downloaded as CSV. It is appropriate for me to work with the dataset now
- I downloaded it and I split the dataset into Train and Test sets. I put the Test away.
- This will be very exciting yet challenging project. I'm excited to learn from the expertise of the professor on this topic