❯ Addressing Fraud in Transactions

❯ Problem Statement
❯ Bank A faces significant challenges in detecting and responding to fraudulent transactions. The current fraud detection system struggles to keep up with evolving fraud patterns, leading to financial losses and erosion of customer trust.

❯ Current Scenario
- Increase in online and mobile banking has led to a rise in sophisticated fraud schemes.
- Existing detection systems are sometimes unable to keep up with new fraud patterns.
- Impact:
  – Financial Losses: Significant monetary losses due to undetected fraud.
  – Customer Trust: Erosion of customer confidence in the bank's security measures.

> The key focus of your analysis is developing a model to identify potentially fraudulent transactions.
> You also need to conduct appropriate exploratory analysis to explore patterns in the data.

> After developing a model you need to provide recommendations to the bank about what they should do in response to potentially fraudulent transactions (i.e. what is the customer response protocol). e.g. should the bank personally phone all customers with potentially fraudulent transactions? You will need to weigh up the likely impact of false positives and false negatives on financial losses and customer trust.

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❯ **Executive Summary**
The project aims to enhance Bank A's fraud detection capabilities and improve the response process for suspected fraudulent transactions. This involves implementing advanced analytics to identify potential fraud and provide recommendations to Bank A about a customer response protocol to minimize financial losses and maintain customer trust.

❯ *Tips!*
- What patterns you've observed from data?
- Exploratory analysis!
- Which ~~matrix/matrices~~ to use? metric/metrics
- What's the impact to customer?
- *Model explainability?

99.9 % Test Set Accuracy

44% Fraud cases misclassified