Xente Credit Scoring Challenge

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Problem Definition

Xente is an app that allows customers to buy products online and take short-term “Pay Later” loans. Before giving a loan, Xente needs to know whether a customer is likely to repay the loan on time or default.

The goal of this project is to predict loan default using a customer’s past e-commerce transaction history. By analysing how customers have previously spent, borrowed, and repaid loans, we can estimate their credit risk before approving a new loan.

Prediction Task

This is a binary classification problem.

Target variable: **IsDefaulted**

- **1** → Customer defaulted on the loan(The customer did not repay the loan within the agreed time)
- **0** → Customer did not default(The customer repaid the loan on time)

The prediction helps Xente make safer and more informed lending decisions.

In this problem, false negatives matter the most. The model predicts *non-default* (safe customer), but the customer actually defaults.

Result: The loan is approved and the company loses money. It is more costly to approve a risky customer who defaults than to reject a customer who would have paid back. Therefore, the model should focus on reducing false negatives, even if it slightly increases false positives.

Class Imbalance

We found that 88% of the customers are Defaulted = 0 and 12% are Defaulted = 1