PITCH DECK

Detection of Fraudulent Bank Transactions

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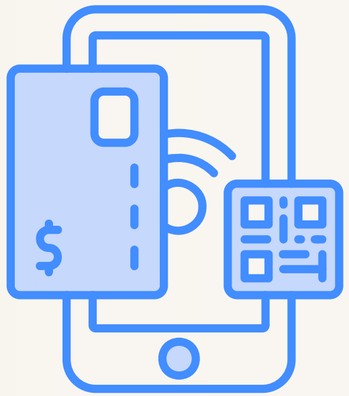
THE PROBLEM



Fraud is the act of deceiving a financial institution or user to gain unauthorized monetary benefit.

Global card fraud losses exceeded $12.5 billion in 2024
(Federal trade commission)

Bank fraud continues to grow year after year.
A 24% rise between 2023 and 2024.

PROJECT OBJECTIVE

Develop a Machine Learning model capable of predicting whether a banking transaction is fraudulent (1) or legitimate (0) using historical transaction, user, and card data.

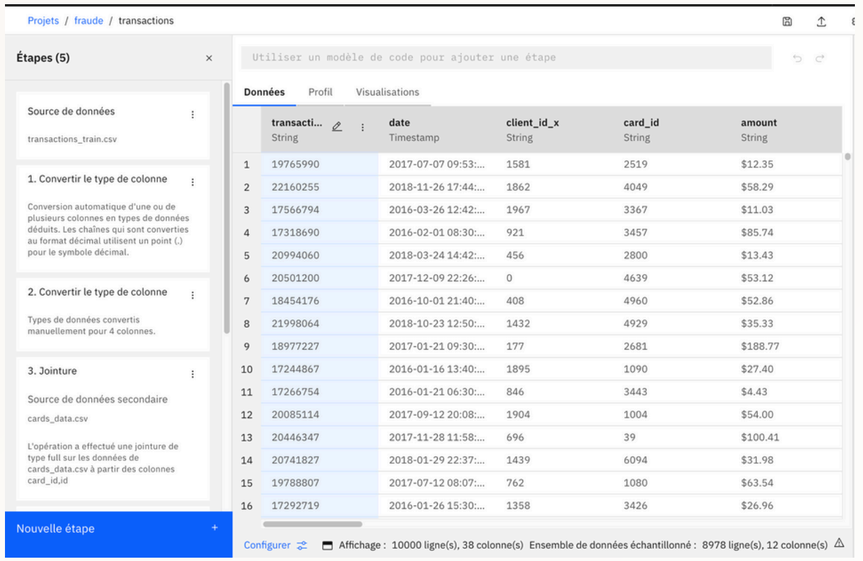
IBM Watson®

DATASET OVERVIEW

210 000 transactions

File Name	Description
transactions_train.csv	Training data containing transaction features (amounts, dates, merchants, etc.)
train_fraud_labels.json	Labels for training transactions (1 = fraud, 0 = non-fraud)
cards_data.csv	Information about payment cards (e.g., card type, issuer)
users_data.csv	User profile and demographic data
mcc_codes.json	Merchant Category Codes and descriptions
evaluation_features.csv	Evaluation transactions (no labels, used only for prediction)

METHODOLOGY & APPROACH



1

Data preparation

type conversion, table joins

2

Models tested with auto AI

Logistic Regres..sion, Random Forest, XGBoost...

3

Evaluation metrics

ROC-AUC, precision, recall, F1-score

4

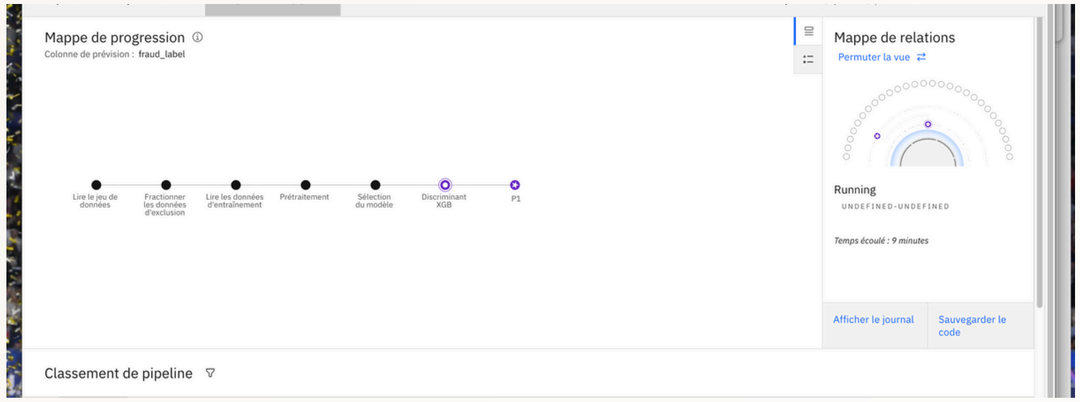
Validation strategy

ensuring generalization to new (unseen) data

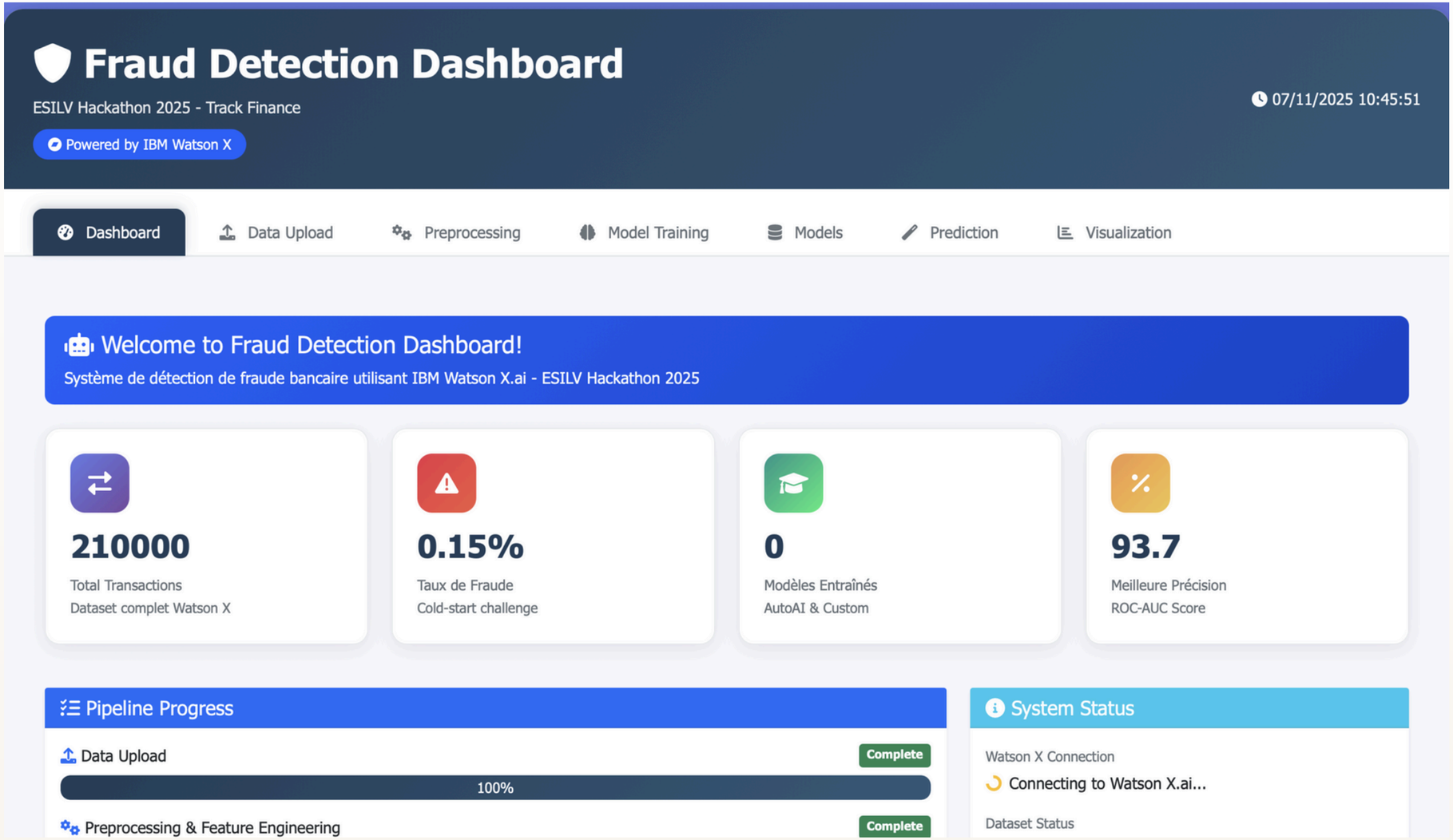
RESULTS & MODEL PERFORMANCE

XGboost

Acuracy 0.99
F1 0.71



DASHBOARD & VISUALIZATIONS



THE END

Thank Your For Listening