SUPTECH forecasting tool

Step 1: explore the dataset

- Global liquidity indicators
- Residential Property Pries
- Consumer Prices
- Exchange rates
- Bank credit to PNFS
- Total credit (household, NFC, PNFS)
- Debt service ratio (household, NFC, PNFS)
- Policy rate
- EA 10-year government bond yield
- EA 2-year government bond yield
- EA Financial Stress Index
- US term spread (10y - 2y)
- Financial stress index

Step 2: define a target variable

- Systemic crisis dummy (binary variable)
- Financial stress index

Step 3: feature selection

Step 4: choose models for initial benchmarking

- Random Forest
- XGBoost
- Ridge
- Neural Network
- OLS
- VAR
- Logistic Regression

Step 5: choose forecasting horizon

Step 5: choose evaluation metrics

- Accuracy score
- F1-score
- RMSE

Step 7: Hyperparameter tuning

Step 8: Integrate MLFLOW to store experiments results

Step 9: evaluate the modelsn peformance

Step 10: visualise the results for the end-user