Credit Score Card

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<u>Objective</u>: Develop a credit scorecard to predict an individual's financial crisis likelihood within two years, enhancing credit scoring effectiveness and aiding lenders' decision-making.

<u>Data</u>: Sourced from Kaggle, contains 150,000 personal consumer loan samples of the past two years; includes basic attributes such as age, debt repayment ability, credit history, property status, and the number of dependents.

Methodology

- <u>Data preprocessing</u>: handling missing values and outliers.

- <u>Explanatory Data Analysis</u>: performing univariate and multivariate analyses

- <u>Modeling</u>: logistic regression and the Weight of Evidence (WOE) technique, involving binning, calculating WOE values, and transforming variables, to develop the credit scorecard.

Results

- The logistic regression model showed strong performance (AUC: 0.692). The optimal ROC curve point had FPR: 0.836, TPR: 0.469, and AUC: 0.692. We converted the model into a credit scorecard using the WOE technique. The final scorecard used IF-THEN rules for each variable.