**Methodology Summary of Default of Credit Card Clients**

*Related Work*

Yashna et al. (2018) [6] applied the correlation-based feature selection, and compared three algorithms, including Logistic Regression (LR), Decision Tree (DT) and Random Forest (RF). While the three algorithms provide similar accuracy, 82%, RF provides the best Area Under Curve (AUC), 77%.

Admel et al. (2018) [3] eliminated outlier and extreme values based on interquartile ranges and used “Best First Method” for feature selection; trained eight models with accuracy, specificity, and sensitivity: LR (82%, 38% & 94%), DT (81%, 35% & 94%), Support Vector Machines (SVM) (82%, 33% & 96%), Naïve Bayes (NB) (66%, 71% & 64%), K-Nearest Neighbors (KNN) (81%, 31% & 95%), Ensemble Learning Methods (Voting (79%, 43% & 93%), Bagging (81%, 37% & 94%), Boosting (81%, 28% & 97%)).

Ruilin (2018) [2] compared traditional models, SVM (RBF > Poly) (80%), KNN, DT & RF, with Feedforward Neural Network (FNN) and Long Short-Term Memory (LSTM). The two neural networks achieve higher accuracy (82.46%, dropping rate 0.1); dropout (prevent NN overfitting) does not guarantee higher accuracy.

Using AUC-ROC, Kumar et al. (2021) [4] compared traditional models, RF (66.2%), NB (55.2%), Multi-layer Perceptron (MLP, 50%), KNN (54.2%), with boosting methods, AdaBoost (65.8%), CatBoost (66.2%), XGBoost (78.2%), LightGBM (78.5%).

In the study of A. Bačová and F. Babič (2021) [7], RF, AdaBoost, XGBoost and Gradient Boosting perform similarly, ~82%; For Class 1, Bagging performs best, achieving 72% precision, based on 10-fold cross-validation.

Huei-Wen et al. (2019) [5] built five models: KNN, DT, AdaBoost, SVM & NN.

Yeh et al. (2009) [1] trained KNN, LR, Linear Discriminant Analysis (LDA), NB, ANN & DT (82%).

W. A. Chishti and S. M. Awan (2019) [8] trained deep neural network with more than 82% accuracy; Class 1 with precision 74%.

Hsu et al. (2019) [9] enhanced RNN, by combining static and dynamic features; 78.2% AUC Score was reached.

Sarah et al. (2021) [10] proposed an unsupervised feature learning method to improve the performance of various classifiers using a stacked sparse autoencoder (SSAE).

With SVM as baseline, A. Lawi and F. Aziz (2018) [11] improved 1.7% prediction accuracy by LS-SVM Ensemble.