Name	Authors	Methodology	Key Points
The application of ML algorithms in Credit Card Default Prediction	Yue Yu	Logistic Regression Random Forest Decision Trees Adaboosting	Talks about FICO(Fair Isaac Corporation) model for credit scoring used in US. Accuracy = 82.12%. Weighted and unweighted models implemented.
Real-time Credit Card Fraud detection using Machine Learning	Anuruddha Thennakoon Chee Bhagyani Sasitha Premadasa Shalitha Mihiranga Nuwan Kuruwitaarachchi	Support Vector Machines Naive Bayes K-Nearest Neighbour Logistic Regression	Focuses on four main fraud ocassions in real-world transactions Each fraud is addressed using a series of ML models Real-time fraud detection using API module
Artificial Neural Network and Bayesian Network models for credit risk prediction	Germanno Teles Joel JPC Rodrigues Ricardo AL Rabelo Sergei A Kozlov	Bayesian Networks Artificial Neural Networks	NB accuracy = 81.32% in 175s (training time) ANN accuracy = 81.35% in 6s (training time) Much lower MSE in case of ANN Mean score of ANN and NB = 82%
Analysis on credit card fraud detection methods	S Benson Edwin Raj A Annie Portia	A fusion approach using Dempster–Shafer theory and Bayesian learning BLAST-SSAHA Hybridization for Credit Card Fraud Detection Credit Card Fraud Detection using Hidden Markov Model Hidden Markov Model Fuzzy Darwinian Detection of Credit Card Fraud Credit Card Fraud Detection Using Bayesian and Neural Networks	Comparison of 5 different methods for credit card fraud detection Fraud detection rate of Fuzzy Darwinian fraud detection systems in terms of true positive is 100% Hidden Markov model accuracy is very low compared to others Neural network shows good accuracy in fraud detection and processing speed is also very high
Credit Card Fraud detection with a neural network	Sushmito Ghosh Douglas L Reilly	Artificial Neural Network	Trained on a large sample of labelled credit card account transactions Tested on a holdout dataset consisting of all account over 2 months This system was installed on IBM 3090 at Mellon Bank of NewYork
Loan Default Forecasting using Data Mining	Bhoomi Patel Harshal Patil Jovita Hembram Shree Jaswal	Kaggle Dataset Logistic Regression (14.963%) Gradient Boosting (84.035%) CatBoost Classifier (84.045%) Random Forest (83.514%)	Different algorithms used like Categorical boosting
Loan default prediction using decision trees and random forest: A comparative study	Mehul Madaan Aniket Kumar Chirag Keshri Rachna Jain Preeti Nagrath	Random Forest (80%) Decision Tree (73%)	Random forest outperformed Decision Tree algorithm Drawback of the dataset used - Biased data i.e., very limited number of people who defaulted on their loan
Loan Default Prediction with Machine Learning Techniques	Lili Lai	AdaBoost (100%) XGBoost (71.66%) Random Forest (50.10%) KNN (50.36%) MLP (50%)	Hyper parameters used in the models described in-depth AUC score used as an evaluation metric
Bank Loan Approval Prediction Using Machine Learning Techniques	Theoneste Ndayisenga	Logistic Regression (69%) Decision Tree(72%) Support Vector Machines(77%) Random Forest(79%) KNN(74%) Gausian Naive Bayes(44%) Gradient Boosting(81%) XG Boost(80%)	The results of their analysis show that the Gradient Boosting is the best model to predict bank loan default, followed by XGBoosting while others like decision trees, random forest, logistic regression performed poorly.
Application of Random Forest Classifier in Loan Default Forecast	Huannan Zhang Yilin Bi Wangdong Jiang1 Chuntian Luo Shengjia Cao Peng Guo Jianjun Zhang	Random Forest(86%) Decision Tree(80%) Logistic Regression(80%)	The experimental results show that the random forest algorithm exceeds the decision tree and logistic regression classification algorithm in predicting performance on this data set.
An Approach for Prediction of Loan Approval using Machine Learning Algorithm	Mohammad Ahmad Sheikh Amit Kumar Goel Tapas Kumar	Logistic Regression(81%)	
Credit card fraud detection using Machine Learning Techniques: A Comparative Analysis	John O. Awoyemi Adebayo O. Adetunmbi Samuel A. Oluwadare	Naive Bayes(97.6%) KNN(97.9%) Logistic Regression(54%)	Hybrid Sampling is used to handle imbalanced data
Credit card fraud detection using artificial neural network	Asha RB Suresh Kumar KR	Support Vector Machines(93%) K-Nearest Neighbour(99.82%) Artificial Neural Network(99.92%)	
A Comparative Study and enhancement of classification techniques using Principal Component Analysis for credit card dataset	Abhishek Agarwal Amit Rana Karan Gupta Neeta Verma	Logistic Regression Random Forest Decision Trees Naive Bayes KNN	Main motive is to compare the performance measures between original dataset and original dataset on which principal component is applied. Accuracy of LR was best in both(before and after PCA) cases. DT was not much affected
Prediction of credit card defaults through data analysis and machine learning techniques	Saurabh Arora Sushant Bindra Survesh Singh Vinay Kumar Nassa	KNN(79%) Decision Tree Random Forest(80%) Logistic Regression(81%) SVM(82%) Naive Bayes(76%)	
Loan Default Risk Assessment using Supervised Learning	Anushi Jain Shivangi Gupta Mandeep Singh Narula	Logistic Regression(88.89%) SVM(73.02%) Random Forest(88.85%) XG Boost(88.57%) ANN(88.74%)	

Model Accuracies & Time Taken (in seconds)

MODELS (Balanced Classes)	Before PCA	After PCA	
Random Forest	96.62% (7.27s)	96.1871 % (18.54)	
Decision Tree	95.12% (6.68s)	96.2044 % (0.70)	
SVM	76.12% (58.20s)	62.6037 % (346.38)	
KNN	93.89% (0.30s)	98.097% (3.84)	
Gausian Naive Bayes	93.89% (0.26s)	98.0970% (2.84)	
ANN	51.54% (209.16s)	50.6233 % (209.09)	
XG Boost	98.52% (4.74s)	97.7011 % (0.56)	
LGBM	97.3% (2.95s)	97.8608 % (1.50)	
Logistic Regression	79.01% (33.46s)	77.3865 % (4.94)	
MLP	92.43% (100.15s)	57.8150% (12.95)	
Ada Boost	97.99% (36.75s)	98.1074% (4.56)	