

SMART LENDER - APPLICANT CREDIBILITY PREDICTION FOR LOAN APPROVAL

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LITERATURE SURVEY

MODELING CONSUMER LOAN DEFAULT PREDICTION USING ENSEMBLE NEURAL NETWORKS

Amira Kamil Ibrahim Hassan, Ajith Abraham constructed a loan default predication model using three several neural network training algorithms. The aim is to test accuracy using attribute filter technique and develop a model called ensemble model by combining the results of those three algorithms. The experiment did on several parameters like training time, MSE, R, iteration for comparison. The best algorithm was Levenberg -Marquardt (LM) because it had largest R and the slowest algorithm is One Step Secant (OSS). For the accuracy purpose, the filtering function was applied on original dataset that produced two another datasets. Then for each data set different training algorithm of neural

network is applied and the filtering function gave the better model among all the models.

AN ENSEMBLE MODEL OF MULTIPLE CLASSIFIERS FOR TIME SERIES PREDICTION

Dr. A. Chitra and S. Uma introduces a two level ensemble model for prediction of time series based on radial bias function network(RBF), k nearest neighbor(KNN) and self organizing map(SOP). The aim is to increasing the prediction accuracy. They construct a model named PAPEM i.e. Pattern prediction Ensemble Model that uses Mackey dataset, Sunspots dataset and Stock Price dataset as dataset and shows the proposed model performs better than the individuals. The Comparison of various classifiers done on root mean square, mean absolute percentage error and prediction accuracy. The results show that the PAPEM model is better than standalone classifier.

STUDY OF CORPORATE CREDIT RISK PREDICTION BASED ON INTEGRATING BOOSTING AND RANDOM SUBSPACE

Gang Wang, Jian Ma proposed an ensemble approach based on boosting and random subspace and the model

named as RS-Boosting for the risk prediction. It gives better performance. The results shows that the proposed approach gives best performance among seven other methods i.e., logistic regression analysis (LRA), decision tree (DT), artificial neural network (ANN), bagging, boosting and random subspace.

ENSEMBLE NEURAL NETWORK STRATEGY FOR PREDICTING CREDIT DEFAULT EVALUATION

A.R.Ghatge, P.P.Halkarnikar develops the artificial neural network model for predict the credit risk of a bank. The Feed- forward back propagation neural network is used to forecast the credit default. They also compare the results with the manual calculations of the bank conducted in year 2004, 2005 and 2006. The results give the better and higher performance over manual calculations of bank.

A REVIEW OF ENSEMBLE TECHNIQUE FOR IMPROVING MAJORITY VOTING FOR CLASSIFIE

Sarwesh Site, Dr. Sadhna K. Mishra proposed a method in which two or more classifiers are combined together

to produce an ensemble model for the better prediction. They used the bagging and boosting techniques and then used random forest technique. The process of classifiers is to improve the performance of the data and it gives better efficiency. In this work, the authors describe various ensemble techniques for binary classification and also for multi class classification. The new technique that is described by the authors for ensemble is COB which gives effective performance of classification but it also compromised with noise and outlier data of classification. Finally they concluded that the ensemble based algorithm improves the results for training data set.

EVALUATING CONSUMER LOANS USING NEURAL NETWORKS ENSEMBLES

Maher Alaraj, Maysam Abbod, and Ziad Hunaiti proposed a new ensemble method for classification of customer loan. This ensemble method is based on neural network. They state that the proposed method gives better results and accuracy as compared to single classifier and any other model.

A LIBRARY FOR ENSEMBLE LEARNING USING SUPPORT VECTOR MACHINES

Marc Claesen, Frank De Smet, Johan A.K. Suykens, Bart De Moor proposed a model based on support vector machine that reduced the complexity of training data and predicts the model with high accuracy. This model is used to avoid duplicate storage of data.

A SYSTEMATIC CREDIT SCORING MODEL BASED ON HETEROGENEOUS CLASSIFIER ENSEMBLES

Alaraj, M. , Abbod, M introduce a credit risk model that are based on homogenous and heterogeneous classifiers. Ensemble model based on three classifiers that are logistic artificial neural network, logistic regression and support vector machine. The results show that the heterogeneous classifiers ensemble gave improved performance and accurateness as compared to homogeneous classifiers ensemble.

ADABOOST ENSEMBLE CLASSIFIERS FOR CORPORATE DEFAULT PREDICTION

Suresh Ramakrishnan, Maryam Mirzaei and Mahmoud Bekri explores Adaboost ensemble method and makes an empirical comparison. The main goal is to compare ensemble classifiers. This study explores Ada Boost and bagging

ensemble for default prediction to contrast with several classifiers including learning Logistic Regression (LR), Decision Tree (DT), artificial Neural Networks (NN) and support vector machine (SVM) as base learner.

ADVANTAGES

It can provide special advantages to the bank. The Loan Prediction System can automatically calculate the weight of each features taking part in loan processing and on new test data same features are processed with respect to their associated weight

DISADVANTAGES

Complexity in analyzing the data.

Prediction is challenging task working in the model

Coding is complex maintaining multiple methods.

Libraries support was not that much familiar.