Abstract

A Meta Classifier in this approach is used for the approval of Loan application, as a Data mining classification tool to support Business operations in a very secure way. The goal of designing a Meta classifier system is to achieve the best possible classification performance for the task of effective decision making. This Meta classifier is the combination of Naïve Bayesian classifier, K-Nearest Neighbor and Fuzzy Set approach. This classifier focuses on combination schemes of multiple classifiers to achieve better classification performance than that obtained by individual models, which in turn is used in providing loans to the customers by verifying the various details relating to the loan such as amount of loan, lending rate, loan term, type of
property, income and credit history of the customer etc. The Meta Classifier helps in analyzing
the involvement of risk and behavior of the customers by distinguishing borrowers who repay
loans promptly from those who don’t, hence reducing the loss of revenue.

References

- Jiawei Han, Micheline Kamber, Jian Pei, Data Mining concepts and techniques 3rd ed., ISBN 978-0-12-381479-1, 2012.
- M. Srinivas, K. P. Supreethi, E. V. Prasad, Efficient text classification using best feature
- P´adraig Cunningham and Sarah Jane Delany &quot;k-Nearest Neighbor
- Ricardas Mileris, Estimation of loan applicants default probability applying discriminant
  analysis and simple bayesian classifier, ECONOMICS AND MANAGEMENT: 2010. 15, ISSN
  1822-6515.
- Is?k Biçer1, Deniz Sevis2, Taner Bilgiç1, Bayesian Credit Scoring Model with Integration
  of Expert Knowledge and customer data. Izmir University of Economics, Turkey, 2010. ISBN
  978-9955-28-598-4.
- Gongde Guo and Daniel Neagu &quot;Similarity-based Classifier Combination for
  Decision Making&quot; Member, IEEE. SMCC-05-06-0125.
- Rujuta Shinde, Priya Vaghurdekar, Prof. Santaji Shinde. Delibration of Data Mining
  in Banking, IJERT Vol-I Issue 8, October-2012.
- Loan Data Sets by &quot;Lending Club&quot;. https://www. lendingclub.
  com/info/download-data. action.
- T. K. Ho, J. J. Hull and S. N. Srihari. &quot;Decision Combination in Multiple Classifier
  Systems&quot; IEEE Transactions on Pattern Analysis and Machine Intelligence, Volume 16,
- L. Xu, A. Krzyzak, and C. Suen. &quot;Methods of Combination Multiple Classifiers
  and Their Applications to Handwritten Recognition&quot; IEEE Transactions on Systems, Man
- LJUPC?O TODOROVSKI, SA?SO D?ZEROSKI &quot;Combining Classifiers with Meta
  Decision Trees&quot; Machine Learning, 50, 223–249, 2003

Index Terms

Computer Science  
Information Sciences
Keywords
Meta Classifier  Naïve Bayesian Classifier  K-Nearest Neighbor  Fuzzy Set Theory