Abstract

The data mining and their different applications are becomes more popular now in these days a number of large and small scale applications are developed with the help of data mining techniques i.e. predictors, regulators, weather forecasting systems and business intelligence. Many of classification algorithms are available to analyze data. Classification is used to classify each item in a data set into one of a predefined set of classes or groups. Classification is the chore of identifying a model or function. There are two kinds of model are available for namely supervised and unsupervised. The performance and accuracy of the supervised data mining techniques are higher as compared to unsupervised techniques therefore in sensitive applications the supervised techniques are used for prediction and classification. In this presented work the supervised learning based data mining techniques for classification and prediction are analyzed.

References
1. Tan P.-N., Steinbach M., and Kumar V. “Introduction to data mining,” Addison Wesley Publishers. 2006.
2. Fayyad U. M., Piatetsky-Shapiro G. and Smyth, P. “Data mining to knowledge discovery in databases, Al Magazine. Vol. 17, No. 3, pp. 37-54, 1996.
3. https://www.sas.com/en_us/insights/analytics/data-mining.html
4. Venkata Suneetha Takkellapati G.V.S.N.R.V Prasad, “Network Intrusion Detection system based on Feature Selection and Triangle area Support Vector Machine”, International Journal of Engineering Trends and Technology- Volume3, Issue 4, 2012.
5. Esh Narayan, Pankaj Singh and Gaurav Kumar Tak, “Intrusion Detection System Using Fuzzy C-Means Clustering with Unsupervised Learning via EM Algorithms” VSRD-IJCSIT, Vol. 2 (6), 502-510, 2012.
6. Deepika Dave, Prof. Vineet Richhariya, “Intrusion detection with KNN classification and DS- theory”, IRACST Vol. 2, No.2, April 2012.
7. P.S. Prabhu, “Network Intrusion Detection Using Enhanced Adaboost Algorithm”, International Journal of Communications and Engineering Volume 3, No.3, Issue:02 March 2012.
8. R. Shanmugavadivu, Dr.N.Nagarajan, “Network Intrusion Detection System Using Fuzzy Logic” IJCSIE Vol. 2 No. 1, 2011.
9. Nasser S. Abouzakhar And Abu Bakar, “A Chi-Square Testing-Based Intrusion Detection Model”, CFET, 2010.
10. Debdupta Barman Roy, Rituparna Chaki, Nabendu Chaki, “A New Cluster-Based Wormhole Intrusion Detection Algorithm for Mobile Ad-Hoc Networks”, IJNSA, Vol 1, No 1, April 2009.
11. Dianbo Jiang, Yahui Yang, Min Xia, “Research on Intrusion Detection Based on an Improved SOM Neural Network”, IEEE 2009.
12. Hazem M. El-Bakry, Nikos Mastorakis, “A Real-Time Intrusion Detection Algorithm for Network Security”, Wseas Transactions on Communications Issue 12, Volume 7, December 2008.
13. Todd, H. L., Gihan V.D., Karl N.L., Biswanath, M., Jeff, W. and David, W. “A network security monitor,” in Proceedings of Symposium on Research in Security and Privacy, Oakland, CA, pp. 296–304, 1990.
14. Teng, H., Chen, K. and Lu, S. “Adaptive real time anomaly detection using inductively generated sequential patterns’, IEEE Computer Society Symposium on Research in Security and Privacy, California, IEEE Computer Society, pp. 278-84, 1990.
15. Anderson, J.B. and Mohan, S. “Sequential coding algorithms: A survey and cost analysis”, IEEE Transactions on Communication, Vol.32, pp. 169-176, 1984.
16. Lane, T. and Brodley, C.E. “Temporal sequence learning and data reduction for anomaly detection”, ACM Transactions on Information and System Security, Vol. 2, No. 3, 1999.
17. Lee, W., Stolfo, S. and Mok, K. “Adaptive intrusion detection: A data mining approach”, Artificial Intelligence Review, Kluwer Academic Publishers, Vol. 14, No.6, pp. 533-567, 2000.
18. Debar, H., Becker, M. and Siboni, D. “A neural network component for an intrusion detection system,” in IEEE Symposium on Research in Computer Security and Privacy, pp. 240-250, 1992.
19. ] R.Thanigaivel, Dr. K.Ramesh Kumar, “Review on Heart Disease Prediction System using Data MiningTechniques”, Asian Journal of Computer Science and Technology (AJCST)Vol.3.No.1 2015 pp 68-74.
20. Rahul edida, RakshitVahe, Rahul reddy, Rahul j, Abhilash, DeeptiKulkarni,"Employeeattrition prediction", Management journal, 2018.
21. KedirEyasu Abdul Kadir, FuleaAmenaTolfsa, “Predict and analysis of employee performance in bank using classification algorithms”, International journal of interdisciplinary current advanced research(IJICAR), Vol. 1, No .1, Feb 2019.
22. Ananya Sarkar, S.M.Shamim, Dr. Md. Shahiduz Zama, Md. MustafizurRahman,”Employeees performance analysis and prediction using K means Clustering and decision tree algorithm”, Global Journals, Vol.18, No. 1,2018.
23. Ersen Yilmaz and Caglar Kilikcier, “Determination of Patient State from Cardiotocogram using LS-SVM with Particle Swarm Optimization and Binary Decision Tree”, Master Thesis, Department of Electrical Electronic Engineering, Uludag University, 2013.
24. Nidhi Singh and Divakar Singh, “Performance Evaluation of K-Means and Hierarchal Clustering in Terms of Accuracy and Running Time”, Ph.D Dissertation, Department of Computer Science and Engineering, Barkatullah University Institute of Technology,2012.

Index Terms

Computer Science
Information Sciences

Keywords

Data Mining, Classification, Decision Tree, KNN Classification, supervised learning