

WLAR-Viz: Weighted least association rules visualization

A.Noraziah^a; Zailani Abdullah^b; Tutut Herawan^a; Mustafa Mat Deris^c

^aFaculty of Computer Systems and Software EngineeringUniversiti Malaysia Pahang
Lebuhraya Tun Razak, Kuantan, Malaysia

^bDepartment of Computer Science, Universiti Malaysia Terengganu, Malaysia

^cFaculty of Computer Science and Information Technology, Universiti Tun Hussein Onn
Malaysia, Parit Raja, Batu Pahat, Malaysia

ABSTRACT

Mining weighted least association rules has been an increasing demand in data mining research. However, mining these types of rules often facing with difficulties especially in identifying which rules are really interesting. One of the alternative solutions is by applying the visualization model in those particular rules. In this paper, a model for visualizing weighted least association rules is proposed. The proposed model contains five main steps, including scanning dataset, constructing Least Pattern Tree (LP-Tree), applying Weighted Support Association Rules (WSAR*), capturing Weighted Least Association Rules (WELAR) and finally visualizing the respective rules. The results show that by using a three dimensional plots provide user friendly navigation to understand the weighted support and weighted least association rules.

KEYWORDS:

Weighted least association rules; Data mining; Visualization

REFERENCES

1. Agrawal, R., Imielinski, T., Swami, A.: Database Mining: A Performance Perspective. *IEEE Transactions on Knowledge and Data Engineering* 5(6), 914–925 (1993)
2. Abdullah, Z., Herawan, T., Deris, M.M.: An Alternative Measure for Mining Weighted Least Association Rule and Its Framework. In: Zain, J.M., Wan Mohd, W.M.B., El-Qawasmeh, E. (eds.) *ICSECS 2011, Part II. CCIS*, vol. 180, pp. 480–494. Springer, Heidelberg (2011)
3. Herawan, T., Yanto, I.T.R., Deris, M.M.: Soft Set Approach for Maximal Association Rules Mining. In: Ślęzak, D., Kim, T.-H., Zhang, Y., Ma, J., Chung, K.-I. (eds.) *DTA 2009. CCIS*, vol. 64, pp. 163–170. Springer, Heidelberg (2009)
4. Abdullah, Z., Herawan, T., Deris, M.M.: Mining Significant Least Association Rules Using Fast SLP-Growth Algorithm. In: Kim, T.-H., Adeli, H. (eds.) *AST/UCMA/ISA/ACN 2010. LNCS*, vol. 6059, pp. 324–336. Springer, Heidelberg (2010)
5. Herawan, T., Deris, M.M.: A soft set approach for association rules mining. *Knowledge Based Systems* 24(1), 186–195 (2011)