ELP-M2: An Efficient Model for Mining Least Patterns from Data Repository

Abdullah Z.[1], Ngah A.[2], Herawan T.[3], Ahmad N.[4], Mohamad S.Z.[5], Hamdan A.R.[5]

1. Faculty of Entrepreneurship and Business / Centre of Computing and Informatics Universiti Malaysia Kelantan Kota Bharu Malaysia
2. School of Informatics and Applied Mathematics, Universiti Malaysia Terengganu, Kuala Terengganu, Malaysia
3. Faculty of Computer Science and Information Technology, Universiti Malaya Kuala Lumpur, Malaysia
4. Faculty of Computer System and Software Engineering, Universiti Malaysia Pahang Malaysia Kuantan, Malaysia
5. Faculty of Information Science and Technology, Universiti Kebangsaan Malaysia, Bangi, Malaysia

ABSTRACT

Most of the algorithm and data structure facing a computational problem when they are required to deal with a highly sparse and dense dataset. Therefore, in this paper we proposed a complete model for mining least patterns known as Efficient Least Pattern Mining Model (ELP-M2) with LP-Tree data structure and LP-Growth algorithm. The comparative study is made with the well-know LP-Tree data structure and LP-Growth algorithm. Two benchmarked datasets from FIMI repository called Kosarak and T40I10D100K were employed. The experimental results with the first and second datasets show that the LP-Growth algorithm is more efficient and outperformed the FP-Growth algorithm at 14% and 57%, respectively.

KEYWORDS

Model Least patterns Data mining Efficient