**Review of various Knowledge Discovery and Data Mining Techniques.**

* 1. References:

Dubey, V., and Singh, B. (2018). A review and Analysis of data mining and knowledge Discovery. Website\*: http://dx.doi.org/10.19101/IJATEE.2018.541006

**1.2 Purpose of study**

We have lot of data mining techniques and methodologies for knowledge extraction and pattern identification from large amount of data. These data mining algorithms has lot of applications in different industries and fields like engineering, medicine, and business. Hence in this article author explained about different data mining techniques and further we will discuss about future research.

**1.3 Related Literature**

The author’s work reviews many research papers from 2015 to 2018 and analyzes each one to determine how data mining tools aid in knowledge discovery and pattern recognition. Various research papers utilize various algorithms to enhance pattern recognition. For example, aprori, tree projection hyper structure mining, direct hashing, pruning, and other similar algorithms are used for knowledge discovery. The frequent pattern is faster than the apriori approach, the author says. Author released this study to inform scholars of the variety of data mining approaches used to address contemporary issues, and clearly explains frequency pattern expansion.

* 1. Strategy of paper:

This article explores the various ways that data mining techniques may be used to extract relevant information from a variety of areas, including business, engineering, etc. ECLAT, tree, projection, DHP, frequency pattern, and other frequently used data mining methods In this essay, the author primarily discusses the FP-development algorithm and how it is effective in outperforming the Aprori algorithm. After that, the author compares various knowledge discovery techniques that various researchers work on to assess effectiveness that are at extraction of knowledge from large amount of data. Author worked on analyzing research papers from 2015-2018 to help and understand more about data mining techniques that are helpful in real applications. Then author compared the current algorithm with the previous algorithm and found the problems from the previous algorithms and betterments that need to be done for current algorithms.

* 1. Conclusion

From the aforementioned experiment, various Knowledge discovery methodologies were used by the author for pattern extraction from large amount of data. He also done analysis on a number of data analysis algorithms then evaluated each algorithm's effectiveness in knowledge discovery, focusing primarily on the FP development algorithm. Finally, he suggested some potential future research areas where data mining techniques might be used to discover knowledge.

Author analyzed various articles from different years, showcasing various data mining algorithms used occasionally, and highlighting the potential for future applications of the FP development algorithm and the positive negative association rule. Author primarily discussed about FP development algorithm, its applications, and why it outperforms older methods.

In this article from research papers to research papers produced from year to year, clearly taken a number of data mining approaches and their contributions to the knowledge process are analyzed and explained those techniques and their shortcomings, and then shown us how other authors have overcome those shortcomings using different algorithms. This author has also clearly shown us how to conduct additional work in filed like variability,positive and negative association rule, and other topics.

* 1. Contribution from paper:

In this paper research, the author's main goal is to show how Knowledge discovery techniques are developing and how they are assisting with data analysis. The author characterized the data mining approach used in knowledge discovery, as well as its drawbacks and how they were addressed by other strategies, by taking into account a number of research articles. Finally, he offered a variety of subjects on which next data mining approaches ought to focus.

2.1Overall Assessment

The author's detailed explanations made the material easy to read. In addition, the author did a great job of keeping a pleasant flow while offering clear explanation. The paper's primary merit is its explanation of how multiple data mining approaches are assisting knowledge discovery for various businesses. I must commend writers' writing abilities. Author precisely defined the various data mining strategies employed by the various researchers in the various study papers. He contrasted several tools that are rapid and efficient in producing knowledge discovery outcomes, concentrating mostly on ECLAT , SPADE algorithms, and FP algorithms, and he demonstrated the potential for more study topics.

2.2Research Methodology

The paper focuses mostly on various data analysis methods that aid in pattern recognition along with knowledge extraction. The author also examines issue statements to see how they may be resolved by enhanced data mining methods. The author took into account the many research paper techniques utilized in various industries and identified the issues with those papers, including positive and negative rules and the method's efficiency in gathering new information. The author then created a projected research scope that may be used for additional investigation.

2.3 Future Research

Although data mining methodologies and techniques aid in knowledge discovery, an effective data mining technique is required to handle situations like negative positive association rules and variability. Although there is room for best algorithms in knowledge discovery techniques, the author used the ECLAT algorithm and SPADE algorithm for Knowledge discovery from large amount of data.

2.4 New Knowledge Learned:

I gained knowledge of various data analysis strategies used for pattern recognition from this review work, and the author made explicit comparisons between many papers written by various authors in various years and mostly focusing on data mining approaches. How they affect knowledge discovery and what must be done to advance data mining approaches for efficient performance.

**3 Questions to discuss**

1) In the future, does ML algorithms will be able to entirely replace data mining methods.