Intro :

*Today, most universities study the captain in data because anything that needs analysis wants to save its data and study on it, whether a practical or theoretical study. Data mining using data mining tools and methods helps in showing the correct result for the validity of the data. There are methods of prospecting in the educational environment, analyzing the methods under study, and coming up with percentages that are useful in making decisions in a particular environment, especially in an educational environment.*

Educational Data Mining (EDM):

Previously, the data was downloaded and worked on manually, and that was useless or not extracting a feasible result from the data, and the data remains useless, but now, after working in data mining and data science, feasible results have been come out in various educational studies, whether coming out with psychological measurements or coming out by taking A decision to change a particular system

The ultimate goal of EDM is to improve the educational process and To explain instructional strategies to make better decisions There are different definitions of EDM, but they all have in common that it is multidisciplinary An area of research that uses different methods and techniques from Machine learning, statistics, data mining, data analysis, to Analyze data collected during teaching and learning for I previously discovered information, relationships, and Patterns in large data warehouses.

The method is summed up in four stages, the first stage is translating the research problem into excavating the evidence, the second stage is the second stage, the search for data in the research problem, the third stage is the evaluation of the evidence, and the fourth stage is to come up with the results of mining the evidence.

Methods and algorithms are used in data mining, the most famous of which is classification, cluster analysis , prediction & association , regression analysis and decision trees .

Classification is a technique of data mining that is used to classify between classes and uses and trains the algorithm using pre-classified and that in tables based on some of characteristics as age, gender, grades, knowledge, academic achievements, motivation,

Cluster analysis is used to divide similar data into groups that were not previously specified. Useful in data processing Phase to define homogeneous groups used as Input for other models. Similar to classification and cluster analysis Can be used to investigate the similarities and differences between Students, courses and teachers .

Prediction refers to calculated assumptions for certain events made based on available processed data. Regression technique can be used for prediction, to model the relationship between one or more independent variables and dependent variables.

Association is a data mining technique used to discover the probability of the co-occurrence of items in a collection. The relationships between co-occurring items are called association rules.

Conclusion

Data mining in the educational process is a high-level work, and in our modern age it is considered one of the most influential sciences because it helps to extract secrets from data or hidden knowledge in the data.