3. A LITERATURE REVIEW ON DATA MINING TECHNIQUES AND ITS USES IN DIFFERENT SECTORS

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Abstract

Data mining is used for mining data from databases and finding out meaningful patterns from the database with its great ability to dig out the hidden information and pattern related to their customer behavior, sales and future trends. This research paper focuses on a detail literature review on data mining techniques with their uses in different sectors. The significance of this review is to provide concise literature on data mining techniques as a valuable source to future researchers.

Keywords: Data Mining, Classification, Knowledge Discovery.

INTRODUCTION

In this modern era, a very large amount of data stored in databases is increasing at a tremendous speed. This requires a necessity for new techniques and tools to support humans in automatically and logically analyzing large data sets to acquire useful information. This growing need gives a view for a new research field called Data Mining or Knowledge Discovery in Databases (KDD), which attract attention from researchers in many different areas including database design, statistics, pattern recognition, machine learning and data visualization. Data mining is the process of discovering insightful, interesting, and novel patterns, as well as descriptive, understandable and predictive models from large-scale data. This research study explains how data mining techniques are useful in different sectors such as healthcare, e-commerce, market basket analysis, education, etc. Also Data Mining is mostly used today by companies with a strong consumer focus on retail, financial, communication, and marketing organizations, to "drill down" into their transactional data and determine pricing, customer preferences and product positioning, impact on sales, customer satisfaction and corporate profits. With data mining, a retailer can use point-of-sale records of customer purchases to develop products and promotions to appeal to specific customer segments. Data mining is to discover knowledge that is of interest from large amounts of data stored in data repositories. Numerous data mining tools are available in the market to predict future trends and assist decision-making, that further help organizations to make proactive decisions by looking into past and present data. The varied application areas of data mining are marketing/sales, customer relationship management, banking, insurance, fraud detection, bioinformatics and many more.

USES OF DATA MINING TECHNIQUES IN DIFFERENT SECTORS

Future Healthcare

Data mining holds great potential to improve health systems. It uses data and analytics to identify best practices that improve care and reduce costs. Researchers use data mining approaches like multi-dimensional databases, machine learning, soft computing, data visualization and statistics. Mining can be used to predict the volume of patients in every category. Processes are developed that make sure that the patients receive appropriate care at the right place and at the right time. Data mining can also help healthcare insurers to detect fraud and abuse.