Data Mining Techniques Appropriate for the Evaluation of Procedure Information

Summary:
The text discusses the explosion of massive data known as 'big data', generated by digital activities such as social media, sensors, online transactions, etc. These data pose challenges in terms of volume, variety, and processing speed. Traditional data processing techniques are not suitable for this scale, hence the importance of exploring methods such as data mining to extract useful information. The literature review section examines data mining techniques for big data, highlighting research on classification, clustering, sentiment analysis, etc. Case studies in healthcare, finance, and marketing demonstrate the effectiveness of data mining. This research methodology utilizes PISA 2022 data to evaluate student performance on a task, classifying and categorizing their responses using data mining. The results indicate the importance of action features for classification and show that supervised and unsupervised methods are complementary in understanding student behaviors. The text also emphasizes the importance of adaptability in data mining methods based on research objectives and data structure. The text discusses the rapid growth of massive data, referred to as 'big data', which are enormous datasets from various digital activities such as social media, sensors, online transactions, etc. These data are voluminous, varied, and rapidly generated, posing considerable challenges for processing and analysis. Data mining is an effective method for handling large amounts of complex data. It extracts useful information using sophisticated algorithms and statistical, machine learning, and database techniques. The literature explores the application of data mining to big data, addressing classification, clustering, sentiment analysis, and image recognition. Case studies demonstrate how data mining can solve problems and generate insights from massive data, in areas such as healthcare, finance, and marketing. The research methodology utilizes data from the PISA 2022 study, which evaluates student performance on a specific task. Data mining analyzes and categorizes students' responses, identifying significant patterns and trends. The research shows the importance of action features in classification and the usefulness of combining supervised and unsupervised learning to understand student behaviors. In summary, it is essential to adapt data mining methods based on research objectives and available data."