Analyzing Transaction Data in e-Commerce

- Role of Data Mining

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1.INTRODUCTION

Data mining, defined as the process of extracting valuable insights from large databases using computer tools and algorithms, is an important component of the Big Data revolution. This transformation is being driven by technical advances that allow organizations to collect massive amounts of data and share insights with customers, partners, and competitors (Papakyriakou, D., & Barbounakis, I. S. (2022)). Using data mining algorithms to extract important insights from raw and sparse data provides a difficulty in selecting accurate, relevant, and intelligible information for knowledge discovery (Kumar, B., Roy, S., Sinha, A., Iwendi, C., & Strážovská, Ľ. (2022)) . One critical application of data mining in the e-commerce industry is the precise prediction of customer buying habits. With the rapid expansion of e-commerce websites for consumers and items, competition is tough and only a click away (Alghanam, O. A., Al-Khatib, S. N., & Hiari, M. O. (2022)). To be competitive, firms must precisely forecast client purchase behavior and provide individualized services based on their preferences.

This paper provides a complete overview and summary of Big Data Mining techniques, including the most commonly used data mining algorithms that can handle huge amounts of data. The review addresses the pros and cons of these algorithms, as well as their specific applications. It provides insights into choosing algorithms based on their particular requirements and the properties of the datasets at hand.One key addition of this paper is the use of data mining techniques to create a predictive model for consumers' next purchases, and then recommend these things to them.

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