

## **Enhancing User Experience in E-commerce through Personalization Algorithms A Study on Information System Design**

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### **ABSTRACT**

This research aims to improve user experience in e-commerce through the use of personalization algorithms in information system design. The research methods used involve literature analysis, prototype development, and user testing. Literature analysis was conducted to understand the concept of personalization, relevant algorithms, and factors influencing user experience in e-commerce. Based on this understanding, a prototype e-commerce information system with personalization features was implemented. User testing is carried out to collect data about user experiences before and after implementing a personalization algorithm. The research results show that the use of personalization algorithms significantly improves user experience in e-commerce. Users report feeling more engaged, increased relevance of content, and ease in finding products that match their preferences. Apart from that, this research also identifies several important factors that need to be considered in the design of e-commerce information systems that use personalization algorithms, such as data privacy, transparency, and user control. In conclusion, the use of personalization algorithms can effectively improve user experience in e-commerce, with the important note of considering relevant factors.

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