MODELING GEN Z SHOPPING PATTERNS IN E-COMMERCE WITH DEEP LEARNING TO MEASURE THE IMPACT OF RECOMMENDATION ALGORITHMS

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ABSTRACT

In the digital era, e-commerce increasingly influences consumer behavior, particularly among Generation Z, who have grown up alongside the development of digital technology. Recommendation algorithms on e-commerce platforms can stimulate consumer behavior through product personalization and streamlined transactions, potentially leading to more impulsive purchases. This situation requires a system capable of objectively analyzing and modeling user consumption behavior using data. This study aims to develop a web-based consumer behavior prediction system using a deep learning approach to model users' levels of shopping impulsivity. The dataset was obtained through a consumer behavior questionnaire and daily financial data, which were then processed using preprocessing and data balancing techniques. The models employed included Artificial Neural Networks (ANN), Recurrent Neural Networks (RNN), and Long Short-Term Memory (LSTM) networks, which were compared to determine the best performance. The developed system integrates the prediction model with a web interface and database, enabling users to evaluate their shopping behavior independently. The results demonstrate that the deep learning model can accurately predict impulsivity levels, and the developed system can serve as a tool for financial literacy education and consumer behavior monitoring. This system's development is expected to help users better understand their spending patterns and promote wiser financial decision-making in the digital age.

Keywords: Consumer Behavior, Generation Z, E-commerce, Deep Learning