Recommendation System for Selecting Logistics Delivery Services Using the Simple Additive Weighting Method

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ABSTRACT

This study aims to develop a web-based decision support system for selecting logistics delivery services using the Simple Additive Weighting (SAW) method. SAW was chosen for its ability to rank multiple alternatives based on user-defined criteria weights. The system uses four main criteria: delivery cost, cashback, estimated delivery time, and COD service availability. It compares seven logistics service providers and generates recommendations based on user preferences. The system integrates real-time data from the RajaOngkir API to ensure accuracy and relevance. Testing was conducted through algorithm verification, blackbox testing, and validation by respondents. The test results for a single case—delivery from Sei Putih Timur II, (Medan) to Kebon Jeruk (Jakarta Barat)—show an accuracy rate of 92,3 %. In this case, JNE emerged as the top alternative based on user-defined preferences. These findings indicate that the SAW method is effective in supporting decision-making and simplifying the selection process for logistics services. However, the recommendations are contextual and depend on location and user preferences.

Keywords: Recommendation system, logistics delivery services, Simple Additive Weighting (SAW), real-time, decision support, (DSS).