PROJECT REPORT

BOOK BORROWING ANALYSIS : UNIKA SOEGIJAPRANATA LIBRARY WITH MULTILAYER PERCEPTRON

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Faculty of Computer Science

Soegijapranata Catholic University

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ABSTRACT

The Unika Soegijapranata library plays an important role as an information center and learning resource for students, researchers and the wider community. Despite its function, the library has not conducted comprehensive studies on visitors using algorithmic methods. Therefore, this study aims to analyze and classify the number of library visitors using the multilayer perceptron algorithm. The dataset used consists of 49,668 visitor records from 2019 to 2023. Data processing is performed after preprocessing steps such as data cleaning and feature selection. The multilayer perceptron model is trained and evaluated to produce clustering results based on book borrowing quantities. The results show that the highest book borrowing frequency occurred in 2022, while the lowest was in 2021. The Faculty of Psychology recorded the most book loans. Based on K-Means clustering, borrowers can be divided into three clusters representing different quantities. This research demonstrates the effectiveness of the multilayer perceptron algorithm in analyzing library visitor data. The classification results provide insights into visitor patterns and borrowing behaviors that can help inform operational decision making at the Unika Soegijapranata library.

Keyword: Unika Soegijapranata, Multilayer Perceptron Algorithm, K-Means