ABSTRACT

DEEP LEARNING-BASED RECOMMENDATION SYSTEM USING GRAPHIC DESIGN PRINCIPLES TO IMPROVE LAYOUT AND VISUAL DESIGN OF IIB DARMAJAYA LMS INTERFACE

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This study aims to develop a recommendation system for improving the interface design of the IIB Darmajaya Learning Management System (LMS) using a Deep Learning based on Convolutional Neural Networks (CNN). This study addresses issues related to the visual appearance of the LMS, including aesthetics, typography, color schemes, and layout, which are considered suboptimal. The CNN model was developed using a dataset of 50 images replicated from ten types of LMS pages. The system was implemented as a web-based application using Flask, and enabled users to upload LMS page screenshots to be classified and reconstructed into more representative design alternatives. The findings indicated that the system operated according to its intended design, although limited prediction accuracy was observed due to the insufficient quantity and diversity of dataset.

Keywords: Deep Learning, CNN, Learning Management System, Graphic Design, Layout Design, User Interface, Recommendation System