

**Klasifikasi Jenis Obat Pada Computer Vision Berbasis Android
Menggunakan Metode Convolutional Neural Network**

(Drug Classification in Android-Based Computer Vision Using Convolutional
Neural Network Method)

Sholihah Ayu Wulandari, S.ST., M.Tr.T. (Dosen Pembimbing)

Hendra Dwi Saputra

Study Program of Informatics Engineering

Majoring of Information Technology

Program Studi Teknik Informatika

Jurusan Teknologi Informasi

ABSTRACT

The widespread circulation of drugs with look-alike packaging designs frequently triggers medication errors among the general public. To address this critical issue, this research proposes an Android-based computer vision application that combines a CNN MobileNetV2 architecture for visual feature recognition and Google ML Kit OCR for textual character extraction. Evaluation in direct field testing demonstrated a robust operational accuracy of 96.67%. This minor performance deviation indicates that the artificial intelligence model remains slightly susceptible to physical environmental dynamics, particularly visual distortions caused by light glare on the packaging surface. Moreover, black box validation proved that the software operates seamlessly, executing the dual-validation logic with high precision while maintaining real-time synchronization with the Firebase database. Ultimately, this intelligent prototype functions effectively as an independent drug verification instrument for partner patients. For future improvements, this study recommends a deeper exploration of advanced data augmentation techniques to enhance visual classification resilience

Keywords: *Convolutional Neural Network, Optical Character Recognition, Computer Vision, Android, Drug Classification.*