

ABSTRACT

Individuals with visual impairments face challenges in identifying Indonesian Rupiah currency, affecting their ability to engage in daily transactions. Previous research has proposed various solutions using image recognition technology and artificial neural networks, yet there remains a need for further development, particularly in addressing currency design variations and changes. This study aims to develop a Rupiah currency classification system based on Convolutional Neural Network (CNN) deployed on Android devices to enhance accuracy and responsiveness, while accounting for suboptimal currency conditions. It also explores the impact of hyperparameters on model performance and optimizes the use of Android devices. This research is expected not only to contribute to improving the quality of life for individuals with visual impairments through independent currency identification capabilities but also to contribute to the advancement of computer vision technology and solutions for visually impaired individuals more broadly.

Keywords: Visual impairment, Indonesian Rupiah, Classification, Convolutional Neural Network, Android