ANALYSIS OF DOMINANT COLOR SEPARATION IN DIGITAL IMAGES USING RGB SEGMENTATION METHOD BASED ON OCTAVE

Abstract

A digital color image consists of three main components, namely red, green, and blue, known as the RGB color model. This study aims to implement a color segmentation method on digital images to classify color dominance using Octave application. The segmentation process is carried out by comparing the intensity of each color channel and producing three output images: red-dominant, green-dominant, and blue-dominant regions. The image was used for testing the effectiveness of color separation through logical masking. The results show that this method accurately isolates objects based on dominant colors and can be applied to various image processing tasks such as object tracking, color classification, and visual analysis. This research provides a foundation for developing simple yet effective computer vision systems