

ABSTRACT

DEVELOPMENT OF OBJECT DETECTION APPLICATION FOR THE VISUALLY IMPAIRED USING YOLO

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According to data from the Indonesian Ministry of Health in 2017, almost 1.5% of the population in Indonesia has experienced blindness, where blindness itself is a limited physical condition due to a lack of vision. So, blind people generally use canes as tools in their daily lives. With the development of the sophisticated technological era from year to year, many application programs have been created specifically to help people with visual impairments, such as tool applications to help the blind walk with different methods to help the blind. Based on this problem, this research aims to create an application program that can be used to help blind people carry out their daily activities. Where the application program can detect objects and obstacles in front of the camera using the YOLO method, and can recognize the face of someone who has gone through the training process using CNN. As well as the application Output in the form of sound. The expected accuracy results in implementing this detection prediction are $\geq 50\%$.

Keywords: Convolutional Neural Network, GTTS, Tunanetra, Confution matrix, YOLO