

## ABSTRACT

Visual impairment poses significant challenges to the daily lives and mobility of millions of people worldwide. In this context, smart assistive technologies have gained momentum in improving the independence and quality of life for the visually impaired. They are having difficulty navigating their everyday lives because they are unable to detect impediments in their environment, and one of their biggest challenges is identifying people. Other than automation, object detection is used in a variety of applications that have yet to be fully explored. This project includes one such application that employs detection to assist visually impaired individuals in identifying items ahead of them for safe navigation, as well as a face recognition system with aural output that may help visually impaired people recognize known and unfamiliar people. Speakers would provide them with voice-based assistance. Deep learning-based Faster Region-Convolutional Neural Network used to identify and recognize humans and objects in the environment in this study. The Faster Region Convolution Neural Network technique processes and classifies the picture taken by the camera. The audio jockey receives the detected picture as an audio input. As a result, this model aids visually impaired persons in a more comfortable manner than white canes.