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Visual Disability

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Abstract: *visually impaired individuals encounter severe challenges in identifying objects and preventing obstacles while moving. This paper proposes a low-cost real-time assistive system based on raspberry pi, pi camera, and ultrasonic sensors to assist the blind in safe mobility. The proposed system identifies objects and obstacles around the visually impaired person and translates this data into voice messages using text-to- speech functionality. The proposed system translates visual data into audio feedback, thus offering artificial vision to visually impaired individuals. The proposed system is compact, user-friendly, and suitable for real- time indoor and outdoor applications.*

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Keywords: raspberry pi, object detection, ultrasonic sensor, pi camera, voice assistance, visually impaired

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