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FINAL YEAR PROJECT REPORT

BLIND NAVIGATION SYSTEM USING AI

In fulfillment of the requirement for degree of
Bachelors in Computer Engineering (BCE)

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Final Year Project Report
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II. Abstract

Proper navigation and detailed perception in familiar or unfamiliar environments are the main roles for human life. Eyesight sense helps humans to abstain from all kinds of dangers and navigate to indoor and outdoor environments. These are challenging activities for blind people in all environments. Many assistive tools have been developed by the blessing of technology like braille compasses and white canes that help them to navigate around in the environment. A vision and cloud-based navigation system for the visually impaired or blind person was developed. Our aim was not only to navigate them but also to perceive the environment in as much detail as a normal person. The proposed system includes ultrasonic sensors detecting obstacles, cameras to capture images to perceive the environment using deep learning algorithms. Blind people interacted with the whole system through a speech recognition module and all the information was stored in the cloud. Android applications is developed to track blinds so that guardians were monitoring them while visiting and reached them in an emergency. The experimental results showed the proposed system could provide more plenty information and user-friendly interaction.

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