CNN Based Object Recognition for Virtually Impaired People

Ajay E R A, B Nivas, Rayankula Channa Keshava, Tarun Chowdary T S

Rao Bahadur Y Mahabaleswarappa Engineering College, Bellary, Karnataka, India

Abstract*: In today's technologically advanced world, there exists a multitude of challenges that individuals with visual impairments encounter on a daily basis. These challenges often hinder their ability to navigate their surroundings independently, access information, and seek assistance in emergency situations. In response to these challenges, there is a growing need for innovative solutions that leverage technology to enhance the quality of life for visually impaired individuals. This project addresses this need by proposing the development of a Raspberry Pi-based assistant system specifically designed to cater to the needs of the visually impaired community.*

The proposed assistant system aims to provide a comprehensive solution that integrates various functionalities such as object detection, text recognition, and emergency communication. By utilizing the capabilities of Raspberry Pi along with peripherals such as cameras, GPS modules, and communication interfaces, the system seeks to empower visually impaired individuals with greater independence, safety, and accessibility. Through the implementation of advanced algorithms and software libraries, the assistant system will be capable of identifying objects in real-time, reading text aloud, and sending emergency alerts with location information.

This project will contribute to the ongoing efforts in the field of assistive technology by offering an affordable, scalable, and user-friendly solution that addresses the unique needs of visually impaired individuals. By harnessing the power of Raspberry Pi and open-source software, the assistant system has the potential to significantly improve the daily lives of visually impaired users, enabling them to navigate their surroundings with confidence and ease..

Keywords: CNN