

# Android Application For Blind People To Detect Objects

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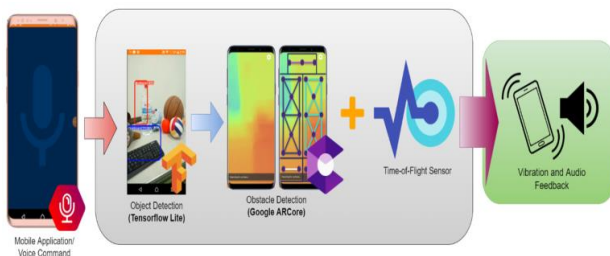
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**Abstract-** A mobile application that makes use of computer vision and artificial intelligence to help visually impaired persons identify items in their surroundings is the goal of the Android application for blind people to detect objects project. With the help of sophisticated algorithms, the suggested solution takes advantage of the real-time image capture capabilities of smartphones to produce auditory feedback. The program increases the independence and improves the quality of life for the visually impaired by giving them the ability to recognize objects.

**Keywords-** Android application, Blind, Smart Phone, Artificial Intelligence, Audio, Object detection, recognize Objects.

## I. INTRODUCTION

People with visual impairments face several obstacles in their daily lives since it makes it more difficult for them to recognize and interact with objects on their own. With the speed at which artificial intelligence and computer vision are developing, mobile applications could close this gap and offer the visually impaired community much-needed assistance. The goal of this project is to create an Android application that uses these technologies to give visually impaired people aural feedback and real-time object recognition, increasing their independence and enabling smooth integration into their environment.



### 1.1 Objective

- 1) Use computer vision and artificial intelligence techniques to create an Android application that can recognize objects in real time.

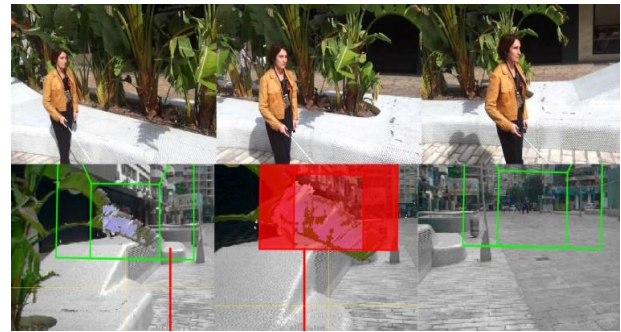
- 2) Take pictures with your smartphone's camera and process them to identify objects.
- 3) Use cutting-edge models and algorithms to precisely recognize a variety of commonplace objects.
- 4) Give visually challenged people auditory feedback that clearly communicates the object information.
- 5) To improve usability and customisation, make sure the interface is easy to use and that the settings are configurable.
- 6) To enhance object recognition's precision, speed, and dependability, carries out a thorough testing and optimization process.
- 7) Expand the item recognition database, integrate user comments, and update the application frequently to improve its capabilities.

## II. EXISTING SYSTEM

There are a number of Android apps available that help the visually impaired identify objects. Here are a few noteworthy instances:

- "Be My Eyes": Be My Eyes is well-known Android software that uses live video conversations to pair blind or visually impaired people with sighted volunteers. For help detecting objects, reading labels, or navigating their environment, users can make assistance requests. Volunteers help users identify things by providing real-time visual assistance.
- "Blind Tool": Blind Tool is Android software that helps blind users recognize items by utilizing the camera and sophisticated image recognition algorithms on the device. By identifying and saying aloud the items it detects in the camera's field of view, it produces audio feedback.
- "Seeing AI": Seeing AI is an Android application that was created by Microsoft and provides a number of features to help those who are blind or visually impaired. It makes use of the camera on the smartphone to read text, detect and describe items, identify individuals, and give audio input that describes the scenario.

- "Tap-TapSee": This Android application enables blind users to take pictures of objects with their phone's camera. The application processes the image and then plays back an audio description to help users identify the object.
- "AipolyVision": This Android software helps blind users recognize items in real time by utilizing artificial intelligence and image recognition techniques. When an object is pointed at with the device's camera, the program detects and describes it to provide voice feedback.



#### IV. CONCLUSIONS

The constructed system has been put to the test using sample data, and every field on each screen has been verified and validated. It won't be too difficult to modify these modules to add other features. Positive and negative feedback, as well as suggestions for enhancements, are always appreciated.

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#### III. PROPOSED SYSTEM

The goal of the suggested Android application for object detection for blind individuals is to offer an approachable and user-friendly real-time object identification system. The program will use the camera on the smartphone to take pictures, which computer vision algorithms and artificial intelligence models will then process. The user will be able to recognize and interact with objects on their own thanks to the system's analysis of the visual input and audible feedback. A smooth user experience will be guaranteed by the suggested system's design, which prioritizes correctness, simplicity, and real-time performance.

#### 3.1 ADVANTAGES

- The recommended Android application aims to provide blind people with an easy-to-use and accessible method for real-time object detection.
- The suggested system will be created with simplicity, accuracy, and real-time performance to offer a smooth user experience.
- The system's processing of the visual input and aural feedback will enable the user to identify and interact with items independently.