Be My Eyes App for Blind People

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Abstract: *A person's ability to see is one of their most crucial senses. Many people in this world, many millions of people, struggle with vision problems. These individuals struggle with communication and information access, making it challenging for them to navigate safely and independently. By alerting the blind to the items in their path, the proposed work aims to convert the visible world into an aural one. With the support of real-time object detection technology, this will enable persons with vision impairment to move autonomously and without the need for outside assistance. Through the use of image processing and machine learning, the program can identify things in real time through the camera and communicate their location to blind users through voice output. Many problems have resulted from the inability to distinguish between item.*

Keywords: Object Recognition, Disease Prediction, Voice Commands, Text-to-Speech Conversion

I. INTRODUCTION

"Be My Eyes" is an android application, which supports voice commands. The application is developed for visually impaired people. After unlocking the mobile phone the application will be launched without any voice command. The systems accept voice command and perform the operations according to it. For performing the further task it first translate the voice into text and then produces output in the form of voice.
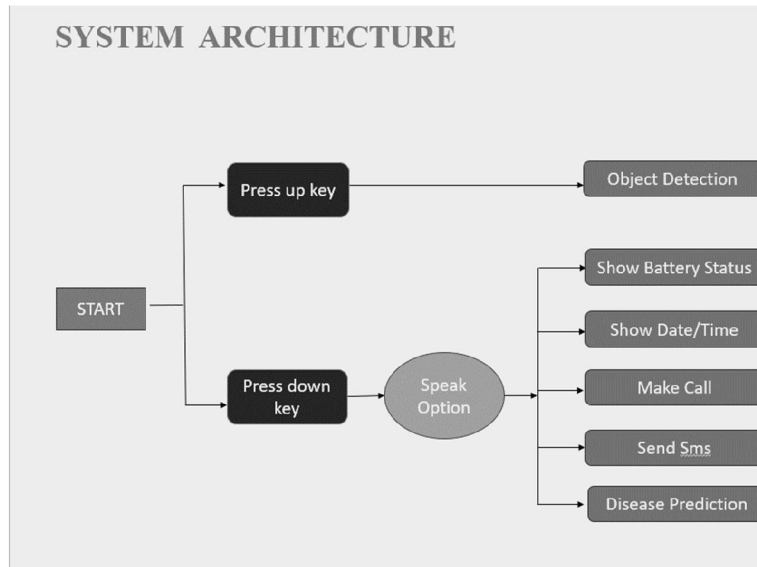
II. MOTIVATION

There are millions of people who experience vision impairment in one way or another. The ability to see is one of the major senses that is crucial for a person to lead a regular existence. Many blind people have significant mobility issues when moving around their surroundings. Due to this condition, the disabled person needs aid or instruction with every move. The everyday, professional, and social lives of those who are blind are quite challenging. The amazing ability of human eyesight to store billions of images in the brain and realise those images by comparing them to pre-images However, some people are still born without the gift of sight, and some have retinal disorders. Due to the widespread use and popularity of Android-based devices, the computer vision application is implemented on the Android platform.
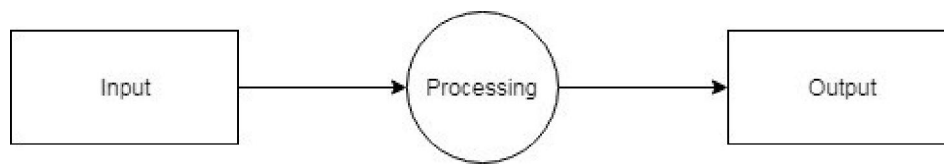
III. OBJECTIVE

The application has a very simple and easily navigable User Interface that suits the visually impaired users. As soon as the application is launched, the camera will start capturing the real time video. As soon as the user presses a button up, the server-side backend algorithm will start processing it and notify the user accordingly as output audio. The Yolo algorithm can be stopped by pressing the same button again. This is how objects around the blind people and their positions are detected and conveyed to them via an audio output using the YOLOv3- tiny algorithm. Proposed a system to predict the disease based on symptoms given by user. We provide Hash set dataset for disease prediction. When the user presses a button down the application will work on voice commands. It will performs the tasks like show battery status, date/time, send SMS, make calls etc

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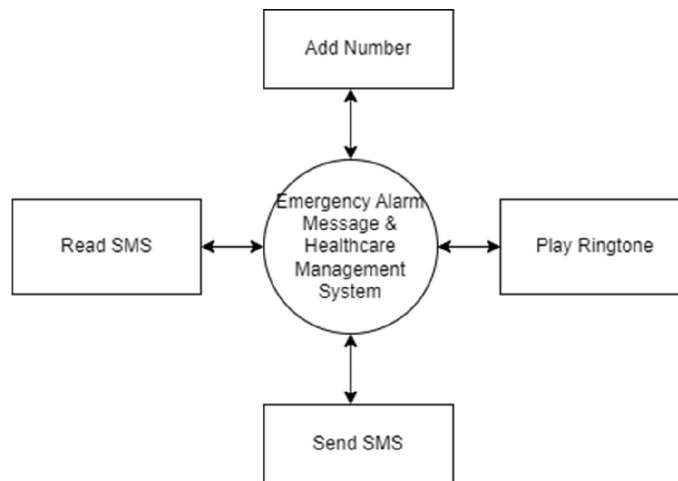2581-9429
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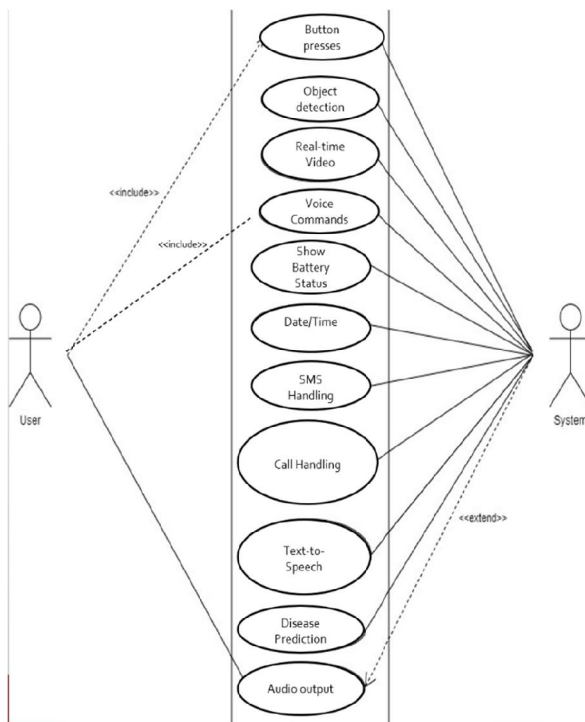## IV. SYSTEM ARCHITECTURE

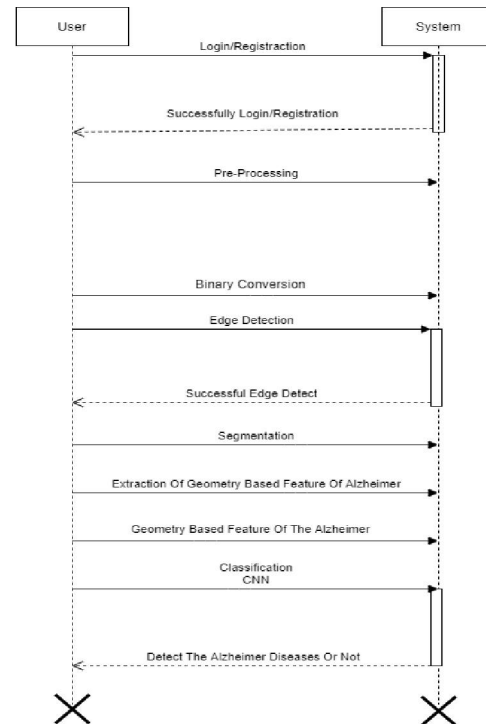DATA FLOW DIAGRAM:

DATA FLOW (0) DIAGRAM

DATA FLOW (1) DIAGRAM

USE CASE AND SEQUENCE DIAGRAMS

USE CASE DIAGRAM

SEQUENCE DIAGRAM

V. SOFTWARE REQUIREMENTS

- IDE: Android Studio
- Coding Language: Kotlin
- Operating System: Windows 10 (64 Bit)

VI. HARDWARE REQUIREMENTS

- RAM: 8 GB
- Hard Disk: 500 GB
- Processor: Intel i5 Processor

VII. APPLICATIONS

- Assisting the Blind
- Object Recognition
- Disease Prediction
- Voice Commands
- Enhancing Independence
- Safety and Navigation

VIII. CONCLUSION

Sign Language is a tool to reduce the communication gap between deaf/mute people and normal humans. The system proposed gives the methodology that aims to work the same way as two-way communication. The proposed method facilitates the conversion of signs into speech, overcoming the requirement of a translator because of real-time conversion. The system acts as the voice of the person who is deaf/mute. This project is a step towards helping specially challenged people. We can enhance it by making it more user-friendly, efficient, portable, and compatible with many

more gestures, as well as dynamic ones. We can improve the system further by making it compatible with mobile phones using its built-in camera. We can increase its working distance using a larger trans-receiver module or over WiFi.

IX. ACKNOWLEDGMENT

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