# Background

Real-time object detection and audio output are difficult tasks to accomplish. This project outlines a straightforward android app that will aid blind persons in understanding their environment. The phone's camera records details about the environment, and TensorFlow's Object Detection API uses that information to do real-time object recognition. The text-to-speech library for Android is then used to transform the recognized objects to audio output. Offline computation of complicated algorithms is simple using Tensorflow Lite. The proposed system's overall accuracy was discovered to be around 90%.

# Problem Statement

The most significant sense in the human body is vision. It enables one to assess and comprehend one's environment. At least 280 million individuals are visually challenged or visually impaired, according to data obtained from the WHO. One's daily activities may be hampered by vision issues. Examples of these difficulties include reading text, crossing streets, and recognizing items in daily life. Although they can learn other coping mechanisms, they encounter certain navigational challenges and social awkwardness.

For instance, people have trouble locating a certain room in a strange setting. It can be challenging for persons who are visually impaired to tell during a discussion whether someone is speaking to them directly or to someone else. To assist those who are blind, a straightforward Android application called "*Object Identifier*" that detects objects is the basis of the suggested solution. With the aid of a smartphone camera and object detection, this application aims to mimic the human eye.

# Aims & Objectives

The main aim is to develop an android app that can recognize object. And the objectives are:

1. Develop a system for object recognition using machine learning to empower the visually impaired.
2. Implement an object recognition system that can recognize objects.
3. Develop and train AI models with Tensorflow.

# Scope

The scope of the proposed system is as follows:

1. Users can accurately identify objects they encounter in their daily lives without the aid of vision.
2. It helps to understand and analyze the scene in the image.
3. It can be used in augmented reality applications to detect objects in the real world and provide information about them.

# Future Works