# Main Features

* Scene Descriptor: Describes the scene around you
* Person: Recognizes friends and describes people around you, including their emotions
* Documents: Provides audio guidance to capture a printed page and recognizes the text, along with its original formatting then speaks the document

## Scene Descriptor

- Object detection : YOLO algorithm

- Obstacle detection : YOLO algorithm

- Calculate Distance : ARCore Depth Lab API by Google

Image

Voice/Vibration Feedback

Calculate Distance

Obstacle Detection

Object Detection

## People Recognition

- Face detection : Viola-Jones

- Face recognition : DeepFace,DeepID, series of systems,VGGFace,FaceNet, FischerFaces/EigenFaces

- Emotion detection : Histogram segmentation, Feature extraction, fuzzy classifier based emotion detection

Diagram

Description automatically generated

## Documents

- CNN

Preprocessing

Image of a document

Segmentation

Feature extraction

Classification

Preprocessing consists of

1. Noise removal
2. Binarization. i.e., converts the image into a binary image
3. Morphological operation. This will increase or decrease the size of the image to a constant image size.