**Project title:** Edith

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**Teammates:**

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**Description:**

Edith is a point-detecting system that plays a role of an in-time auditory instructor to help people in need, especially blind people and children.

For blind people, in the past, they can touch without knowing what it is, but they can point the things with fingers after touching them, and system will tell them what the thing is.

For young kids, they will learn more about this world when their parents are not accompanying them. Also, it helps parents to release some pressure of family education.

For normal people, some of them prefer listening to reading, so this system &device will bring them great convenience.

**Learning objectives:**

1. Pyttsx3

2. Google Firebase & IFTTT

3. Yolov5

4. PaddleOCR

5. PyTorch

6. OpenCV

7. MediaPipe

**Tasks:**

**Edge Device Group:**

**Xiao Wang**: Used pyttsx3 for voice synthesis in mp4 format and broadcast according to the giving text information.

**Hanyong Liu**: Program on edge device for transforming video stream to pictures and sending them to PC through socket and UDP & receiving and processing voice results from PC for broadcast.

**Panyang Chen**: Assist Xiao Wang. Set up Google Firebase and IFTTT to collect results from PC and send results to mobile phones.

**Server Group:**

**Haoran Liu**: Train object detection model with Yolov5. Test accuracy and apply it in the code.

**Haozhong Tan**: Train character detection model with PaddleOCR. Test accuracy and apply it in the code.

**Yunxuan Shi**: Applied OpenCV to collect and process the input from edge device, write feedback into firebase and send it to mobile phone IFTTT & send detection result to edge device using socket and UDP.

**Project illustration:**

图示

描述已自动生成