Communicator for Blind and Aphasic Persons with Alarm

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Do you know...

历年全国视力残疾人数

数据来源：时代数据、
中国残疾人联合会、中国盲人协会

Datagoo | 时代数据

占总人口：
1.26%

1731万

占总人口：
0.72%

1233万

1263万

755万

1987年　　　2006年　　　2010年　　　2020年

Do you know…

- British BBC visually impaired reporter Sean Deeley was robbed on the streets of London on December 27. He was the target of this robbery because he is blind.

- Deeley suggested that it would be best for ordinary people to call the police if they encountered similar situations.
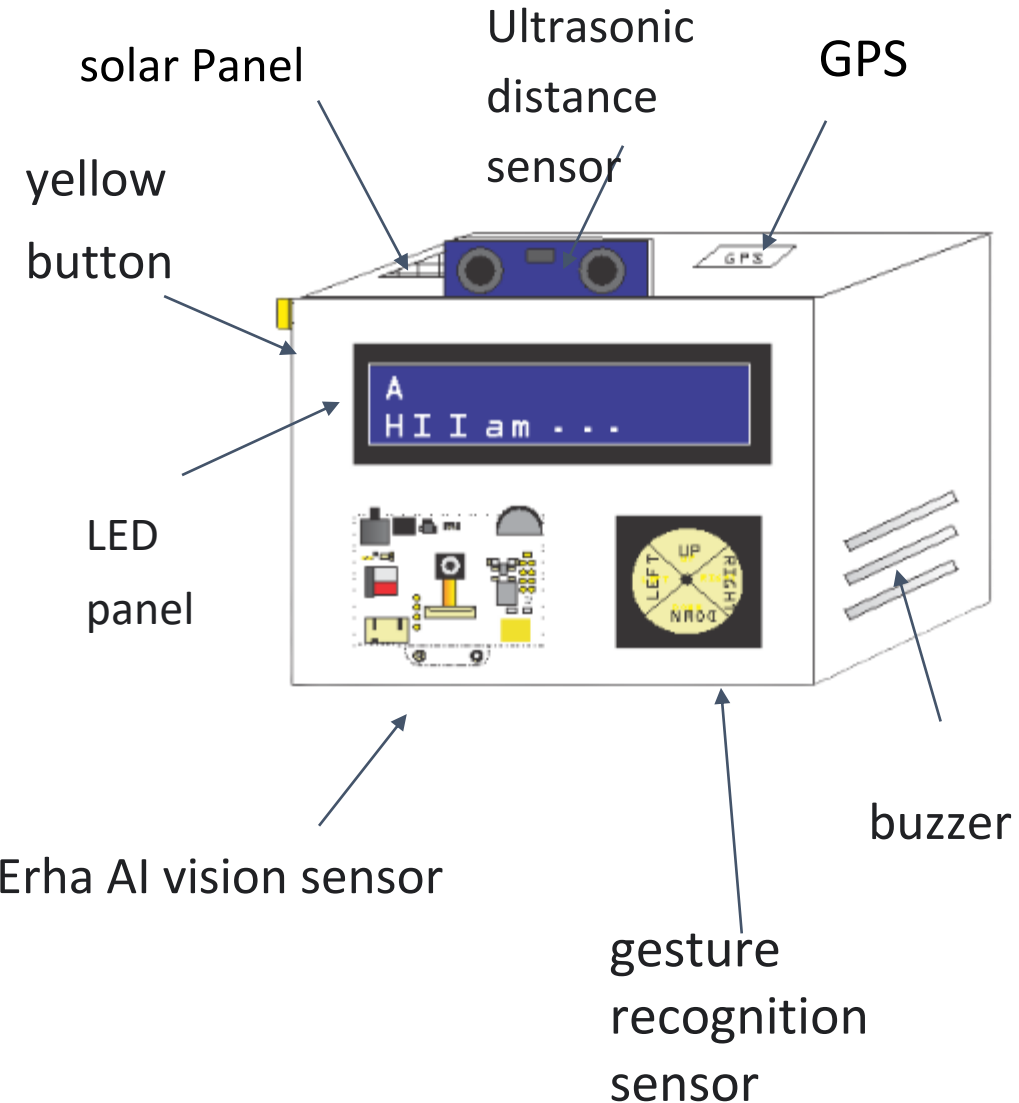
1)Creative Motivation

It must be annoying for the blind person to get hurt many times because of their inconvenience in their sight or when they are unable to communicate with other verbally disabled people.

In 2021, China was the largest group of blind people, with more than 8 million, accounting for 20% of the world's blind population.
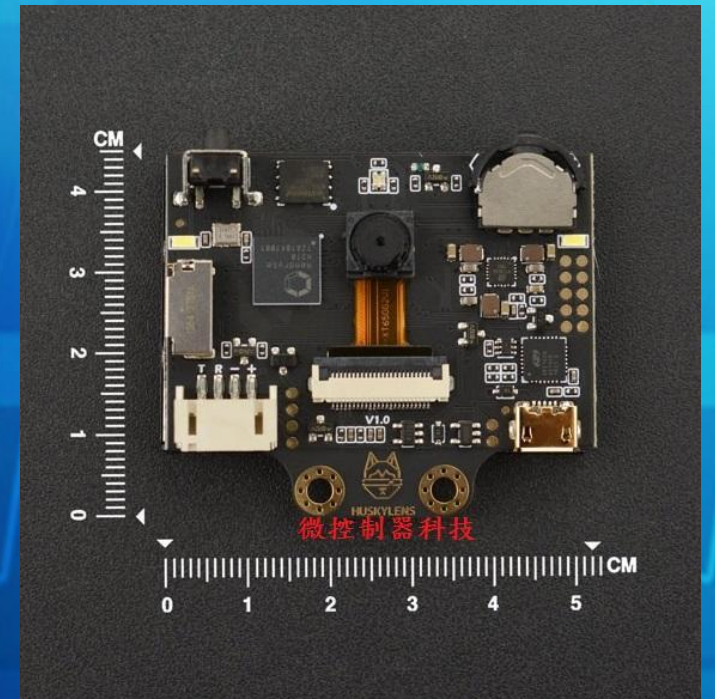
Instructions

- First, wave your hand up and the machine will start running.
- After that, make a gesture to the machine, and the machine will judge what sign language it is.

- Finally, the speech synthesis module inside the machine will speak the translated signs to the blind person.

- If the ultrasonic distance sensor is 3 meters away from the wall, a prompt will sound.
- When in danger, you can press the yellow button to activate the buzzer.

solar Panel

Ultrasonic distance sensor

GPS

yellow button

A
HI I am...

LED panel

Erha AI vision sensor

buzzer

gesture recognition sensor

2) Inquiry Process

- The AI vision sensor sometimes freezes and inadvertently learns something else.

- Sometimes when it disconnects, it forgets what it has learnt.

3) Scientific method & principle

Ultrasonic ranging sensor principle:

- Ultrasonic waves of the same frequency are emitted, propagated through the air medium, and reflected by the measurement target, and the pulses are received by the ultrasonic receiver.

Principle of AI vision sensor:

- After the image is captured, it is compared to a reference image in memory for analysis.

4) Main Contribution

This smart machine can:

- Let the blind communicate with other people normally
- Help blind people in danger
- Let the blind live more conveniently and easily

5）Summarize

- Use artificial intelligence methods to detect gestures and distances.
- Do not have prejudice on the blind. They have done nothing wrong. They just can't see this beautiful world.

thanks for watching