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"You say, and I understand" mobile equipment sign language recognition system

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According to statistic, there are nearly 500 million deaf-mutes who are suffering from the communication barriers around the world. Sign language makes the communication among deaf-mutes much more convenient. However, the communication between a normal person and a deaf-mutes is still a problem remained to be solved. Sometimes we may encounter such an embarrassing situation in daily life: we can't understand the sign language of the deaf-mutes, and the words said by us can't be heard by deaf-mutes either. In this case, we can only turn to a public platform——text. At present, we just need a voice converting software if normal people want to pass on a message to a deaf-mute. But where is the way in which the gestures can be translated into words?

So the sign language recognition technology seems very necessary. —Sign language recognition" means learning the meaning of the sign language by obtaining the data of sign language through the collecting device, using pattern recognition algorithm and combining with context. Then the sign language can be translated into voice or words and conveyed to normal people who don't know sign language, achieving —understanding sign language.

Today, the mainstream sign language recognition is based on data gloves and computer camera, which measures the tracks and timing information when the hands move in the space through data gloves and position tracker. Apparently, this product is expensive, complex and difficult to be carried. For this purpose, our team designed a set of sign language recognition which is easy to be loaded on mobile portable devices such as mobile phones and tablet. It can analyze the sign language and translate it into words or voice, then outputting the words or voice. This product is equal to a synchronous translator, solving the problem of communication barriers of deaf-mutes. Using a mobile phone app in real-time deaf sign language translation, is definitely a great reform in the development of the deaf-mutes' communication. Furthermore, this product can promote the development of the human computer interaction research. The platform is excellent and the prospect is broad.