Universal Sign Language Translation Gloves

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Most deaf-mute people can communicate to each other and to specially trained people using sign languages. However these languages are not understood by many, besides sign languages are not universal which means an English sign language user cannot communicate to a Chinese sign language user. To break this barrier, we have developed a sign language glove that can translate its message to a smart phone via a specially designed mobile App. The principle of the glove is that it records the motion of the hand and fingers of the user which changes the resistance of the sensors lined within the gloves. The Arduino Nano will sense the change of resistance which then transmits the data from the glove to the smart-phone App through HC-06. The smartphone App will compare the data collected with its database and translate it into the correct text and be displayed on the phone. Audio output of the translated text is also available from the App. Our sign-language translate glove is very innovative and practical. It is extremely portable and easy to use with a fast translation response time. Eventually we hope to build a very large database in many different languages so that communication for deaf-mute people will no longer be a problem around the world, making sign languages understood by everyone!

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