Sign Language to Text and Speech Conversion using Smart wearable Gloves

Abstract

Sign language is an important tool for communication among the hearing-impaired and hard-of-hearing community. However, it can be a challenge for those who do not understand sign language to communicate with this community. In this project, we propose the development of a smart wearable glove using Flex sensors, Gyroscope and Accelerometer that translates sign language into text and speech in real-time.

The device will be using these sensors and data processing algorithms that recognize hand gestures and convert them into text and speech. The device will be designed to be portable and user-friendly, allowing the wearer to use it anywhere and anytime without hindering their mobility.

The main objective of this project is to bridge the communication gap between the deaf and hard-of-hearing community and the hearing community. By providing a means of real-time translation of sign language into text and speech, we aim to improve communication and enable better integration of the hearing-impaired and hard-of-hearing community in society.

The proposed wearable glove has the potential to revolutionize the way we communicate with the deaf and hard-of-hearing community. It has applications in education, healthcare, and everyday communication, and can make a significant impact on the lives of millions of people worldwide.

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