

Project 5 Proposal Sign Language Translator

Young Jeong

Overview:

About 70 million people in the world are deaf and use sign language, and of those people, more than 1 million people use American Sign Language (ASL) as their primary sign language. With ever increasing importance of smart phones and smart home systems in our everyday lives, it's just as important to make it easier for the deaf and other users of sign language to be able to reap the benefits just as easily as the rest of us.

I want to create a sign language translation system where a sign language letters can be translated into English letters and then displayed. I see a lot of application of an app like this, such as deaf assistance to video chats (FaceTime, Skype, etc) or other videos that require ASL to English translations.

Data:


I am collecting data from a bunch of sources, to make sure that I have enough "hands". So far I have a dataset of still images of ASL letters with 14 different hands here:

<https://empslocal.ex.ac.uk/people/staff/np331/index.php?section=FingerSpellingDataset>

I plan to look at other hands dataset before aggregating to make sure the hands are well-represented (for example, hands of difference races, ages, etc.). If I feel that the dataset I have is enough, I may choose to record my own hand or others around me (with their consent, of course).

After the MVP:

I want to incorporate some facial expressions and add them as either real words (i.e. happy, sad,

mad) or emoticons (i.e. ). I can also think of other simple gestures (but not motions) and translate them into words.