

Sign Language Translator

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Introduction

Communication is the basic form for exchanging thoughts, views, perception and the ideas we think. This not only helps to portray our reviews, thoughts and emotions better but also helps the other person take necessary steps/actions accordingly. But is it the same for person suffering from hearing and speaking disabilities? These persons know sign language and whenever they want to communicate with us they do it via gestures i.e. sign language and most of the times we are unaware as to what it means and we just nod and interpret it in any way and just walk away. Ever thought how that person would have felt at those times, and it is really not his/her mistake because they don't know any other means of communication. So we have taken this problem seriously and to solve this communication gap and to bridge the gap we are creating a sign language translator which would not only translate gesture performed by these person and it will convert it into text & audio and also it will convert text/audio from us to sign language so that they can understand as to what do we want to tell.

Abstract

Sign language is used by people who are speaking and hearing disability with uses hand motion. A person with this disability is usually unable to communicate with a person who is unable to understand sign language. It discusses an improved method for sign language recognition and conversion of speech to signs or vice versa. The algorithm devised is capable of extracting signs from video sequences using skin color segmentation. It distinguishes between static and dynamic gestures and extracts the appropriate feature vector.

Technology Stack

- Python
- Keras
- Android
- Progressive Web Application
- Rethinkdb

Proposed System

- Translator for people with listening and speaking disabilities.
- Gesture recognition to understand Sign Language, and then it will be translated both in text as well as audio for other user.
- Speak the sentence and that sentence will be converted into set of gestures to understand by the other person.
- Come and learn this Sign Language.

Project Planning

- Research about technologies and algorithm - August End
- Learning - Mid September
- Designing - 1st week of October
- Development - End of November
- Testing - End of December
- Training and Modification - End of February