National Institute of Technology Karnataka, Surathkal Department of Computer Science and Engineering Mini project proposal submission (Computer Graphics)

Class: VI Sem. BTech CSE (Jan.-Apr.2018)

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Title: Word to Sign converter for hearing impaired people.

Abstract

Humans interact with each other only if there is a common medium for communication i.e language. There are innumerable languages and technologies for communication among the people with no disabilities, but this is not the case with the hearing-impaired.

Our project aims to improve the communication with the people who have no proper hearing ability, thereby decreasing the communication gap between the normal people and people with hearing impaired. This can be achieved by using any sign language to express themselves. At the first sight, as an idea, how difficult could make a text language converter. There are several forms of communication other than oral communication among people. One of those is visual communication, e.g., hand gesture, body language, etc. This type of communication is a useful tool to improve a quality of life for deaf or non-vocal persons. Deaf or non-vocal persons communicate using sign language or hand gesture. However, there is a barrier between hearing and deaf persons because most hearing persons cannot understand the language. Hence, the problem of recognizing a sign language becomes an interesting and popular research area.

This system is composed of an Automatic word Recognition system, followed by a statistical translation module and an animated agent that represents the different signs. This presents translation results of input sentences and sentences from the automatic word recognizer.

Inputs

Any Text which needs to be converted to sign language(i.e animation of input)

Outputs

The output would be hand gestures of animated agent which are equivalent to the given input.

Performance measurement criteria (Milestones and dates):

This project has been divided into the following milestones

- 1. Gathering information about different sign languages- 1 January to 10 January, 2018
- 2. Working on conversion word to sign language- 11 January to 22 January, 2018
- 3. Representing the sign language through animation 23 January to 5 February