



# **iJRASET**

International Journal For Research in  
Applied Science and Engineering Technology



---

# **INTERNATIONAL JOURNAL FOR RESEARCH**

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

---

**Volume: 7      Issue: IV      Month of publication: April 2019**

**DOI: <https://doi.org/10.22214/ijraset.2019.4242>**

**[www.ijraset.com](http://www.ijraset.com)**

**Call:  08813907089**

**E-mail ID: [ijraset@gmail.com](mailto:ijraset@gmail.com)**

# Audio to sign language translation

Gitte Sajeli<sup>1</sup>, Mangrule Rajnigandha<sup>2</sup>, Sonavane Manasi<sup>3</sup>

<sup>1, 2, 3</sup>Comp MMCOE, Pune, India

**Abstract:** Sign language is a visual language that is used by deaf and dumb people for communication. It is achieved by simultaneously combining hand shapes, orientation and movement of the hands, arms or body, and facial expressions. So this topic is based on converting the text or speech using text to speech api, for that Natural Language processing is used for breakdown of text into smaller understandable parts, then assign sign symbol to text using sign dictionary.

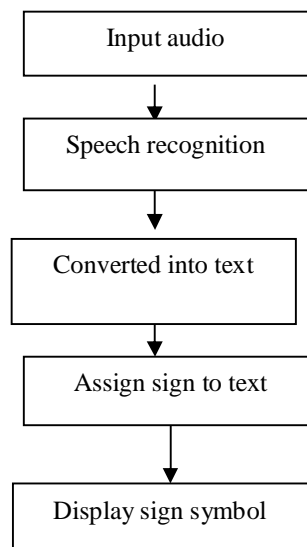
**Keywords:** Indian sign language, speech recognition.

## I. INTRODUCTION

Sign language is common language that used deaf and dumb people for communication. But deaf and dumb people communicate with normal people or vice versa then so many problems are occur. In the world there are so many sign languages are present. There are No Fixed sign language for everywhere, each and every country have their own sign languages and according to that different rules are defined.

## II. METHODOLOGY

Deaf and dumb people understands only sign language but when they communicate with other people i.e. non deaf then it need an interpreter. so this system is designed to avoid that dependency.



So in this architecture user give the audio input into computer. then this audio input is passed to speech recognition. speech recognition converts that audio into small understandable part of text. speech recognition used different technology to break down the audio into text.

Then system assign sign symbol to that small part of text using Indian sign language. when sign are assign it will display the sign symbol to receiver.

## III. RESULTS

the system will give accurate results but in some cases the result might be wrong. If user give the input in different languages like Hindi, so that to avoid that problem some changes are required. in this system user give the input as audio and system will convert that audio into sign language which understands by deaf and dumb people.



#### IV. CONCLUSION

Deaf and dumb people understand sign language only but when normal (non deaf) people want to communicate with deaf and dumb people then they have so many problems are faced. So this system works as a bridge between normal people and deaf people, it converts the audio or speech into sign language which is understandable by deaf and dumb people.

#### REFERENCES

- [1] Urmila Shrawankar, Sayli Dixit, "Conversion of Tactile Sign Language into English for Deaf/Dumb Interaction", International Journal of Natural Computing Research, vol. 6, pp. 53, 2017
- [2] Vi N. T. Truong, Chuan-Kai Yang, Quoc-Viet Tran, "A translator for American sign language to text and speech", Consumer Electronics 2016 IEEE 5th Global Conference on, pp. 1-2, 2016
- [3] Hee-Deok Yang, Stan Sclaroff, and Seong-Whan Lee, "Sign Language Spotting with a Threshold Model Based on Conditional Random Fields", IEEE Transactions on Pattern Analysis and Machine Intelligence, vol. 31, no. 7, pp. 1264-1277, July 2009
- [4] Hung-Yu Su and Chung-Hsien Wu, "Improving Structural Statistical Machine Translation for Sign Language with Small Corpus Using Thematic Role Templates as Translation Memory", IEEE Transaction on Audio, Speech and Language Processing, vol. 17, no. 7, pp. 1305-1315, September 2009
- [5] M. Benzeghiba, R. De Mori, O. Deroo, etc, "Automatic speech recognition and speech variability: A review" Speech Communication, Volume 49, Issues 10-11, October-November 2007, Pages 763-786





10.22214/IJRASET



45.98



IMPACT FACTOR:  
7.129



IMPACT FACTOR:  
7.429



# INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Call : 08813907089  (24\*7 Support on Whatsapp)