K. S. INSTITUTE OF TECHNOLOGY, BANGALORE-560109
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
PROJECT PHASE 1 + SEMINAR (18CSP77)

PROJECT ABSTRACT SUBMISSION 7TH SEM A & B SEC 2021-22 (Odd Sem)

PROJECT TITLE: Hand Gesture Recognition for Deaf and Dumb

Batch No.: 2021_CSE_35	**Guide Name: Dr. Deepa S R**

Sl. No.	NAME	USN
1	Goutham M	1KS18CS024
2	Dhananjaya S	1KS18CS018
3	Kiran V Dambal	1KS18CS033
4	Ganesh A	1KS18CS023

ABSTRACT

In recent years, the number of deaf-dumb people has increased because of birth defects and other issues. Since a deaf and mute person cannot talk with an ordinary person in order that they ought to rely on some kind of communication system. Linguistic communication provides the most effective conversation platform for the mute person to speak with an ordinary person. The gesture shows some physical movements of the hand that convey a piece of information. Gesture recognition is the analytical interpretation of the movement of an individual through an information processing system. In addition to this, communication with sign language is not a very easy task. This problem demands a better solution which can assist speech impaired population converse without any difficulties. The aim of this project is to build up a system for hand gesture recognition that acknowledges hand gestures and then converts them into text/voice.

Sometimes people interpret the messages wrongly either through sign language or through lip reading or lip sync. This project is made in such a way to help the general population and also specially challenged people to hold equal par in the society. This project aimed to establish an appropriate recognition model for reading or identifying the hand gesture according Indian Sign Language Organization (ISL).

This model will be a reliable tool for the deaf and dumb people to effectively communicate with ordinary person without relying on someone to translate.

We want to build a new Convolutional Neural Network (CNN) where sequences of hand-skeletal joints' positions are processed by parallel convolutions; We then investigate the performance of this model on hand gesture sequence classification tasks. The proposed system is expected to give a classification accuracy of 85 - 90%.

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System Requirements (H/W and S/W)
Minimum Hardware Requirements: • Windows OS version 8 or higher. • Intel i3 processor or higher. • Minimum of 4GB RAM or higher. • Web Camera. • Graphics Card 2GB or higher. **Software Requirements:** • Python • Jupyter Notebook • Tensorflow • Keras • OpenCV • PyTorch

Base Paper Submitted: YES/NO

Reference : "International Research Journal of Engineering and Technology (IRJET)" Parshwa P. Patil1, Maithili J. Phatak1, Suharsh S. Kale,
Hand Gesture Recognition for Deaf and Dumb, https://www.irjet.net/

Note: Not for Student Use

ACCEPTED	REJECTED	RE SUBMIT
Reason for Rejection:		
Reason for Re Submit:		

Project Coordinator **HOD**