Batch No:11

SHRI VISHNU ENGINEERING COLLEGE FOR WOMEN:: BHIMAVARAM
(AUTONOMOUS)
DEPARTMENT OF CSE
Academic Year:: 2021-22 :: II Semester

B.Tech - PROJECT WORK:: ABSTRACT

Name of the Class / Section	IV CSE- B		
Batch Number	B11		
Project Domain / Technology	Machine Learning		
Project Title	Sign Language Detection		
Guide Name	Mrs.P.R.Sudha Rani		
Students Registered	**Registered Number**	**Student Name**	**Student Signature**
	18B01A0596	Maddi Keerthi Priya	
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Signature of Internal Project Guide	**Signature of B.Tech Project – Coordinator**	**Signature of Head of the Department**

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Abstract of the Project (In 200 words)

SIGN LANGUAGE DETECTION

Speech Impairment is a disability that affects the ability to communicate. In general, dumb people have difficulty in communicating with others. People who are affected by this, use other media of communication such as "**Sign Language".** Sign Language is a Language in which we make use of hand movements and gestures to communicate with people who are mainly deaf and dumb. Although Sign Language is Popular, many People can't understand it.

The Main aim of this work is to create a vision-based application that offers Sign Language translation to text/Voice thus aiding Communication between Signers and Non-Signers.

Existing System (If any) – Features & Drawbacks

In Existing System, the module was developed for dumb Person using flex sensor, there user hand is attached with the flex Sensors. On this Module, the flex sensor reacts on the bend of each finger individually. By taking that value controller starts to react with speech. Each Flex sensor holds a unique voice and output a stream of data that varies with degree of bend. And in other existing systems, the work is done only for some Alphabets and not for the words or sentences.

DRAWBACKS OF EXISTING SYSTEM

1. In Existing System, it is restricted to only 10 voice announcements. It may reduce Product Capacity.
2. One of the Major Problem is Dumb Person Should always carry the hardware with them.
3. They can't do any other work with flex sensor on fingers and also sensors should be placed straight.

Proposed System – Features
List of objectives/features that are planned to implement.

In the Proposed System, Dumb Person should provide a gesture or sign image to the system. The System evaluates the sign input with matlab image processing technique and classifies the input to the recognized identification. Later it initiates the voice media through the system when the input image matches with the given dataset. And the output will be shown in the text format also.

ADVANTAGES OF PROPOSED SYSTEM

1.There is no need for carrying more sensors with the user because we are using images for processing the hand signs without any external sensors.

2.Easy to communicate between Normal people and Disabled People.

(i)Functional Requirements
(ii) Non Functional Requirements
(iii) Software & Hardware Requirements

(i)Functional Requirements

A Functional Requirement is a description of the service that the software must offer. It describes a software system or its components. A Function is nothing but inputs to the software system, its behavior and outputs.

- Predict the correct hand sign of the humans.
- After Prediction, Convert the hand sign meaning into voice.

(ii) Non-Functional Requirements

Non Functional Requirements specifies the quality attribute of a software system. They judge the software system based on Responsiveness, Usability, Security, Portability. Non-functional requirements are called qualities of a system, there are as follows:

- Performance-The average response time of the system is less.
- Operability - The interface of the system will be consistent.
- Understandability-Because of user friendly interfaces, it is more understandable to the users

(iii) Software & Hardware Requirements

Hardware Requirements

Operating System	: Windows 10
RAM	: 4GB
Processor	: Intel core i3 or above
Hard Disk	: 20GB or above

Software Requirements

Python , Anaconda Navigator, Tensor Flow, Streamlit

	Expected Date of completion 10-04-2022

Literature Survey	https://www.irjet.net/archives/V7/i11/IRJET-V7I1155.pdf https://www.ijcrt.org/papers/IJCRT2103503.pdf
Modules	**Expected date of completion**
Data Preprocessing	20-02-2022
Train & Test the model	20-03-2022
Prediction	27-03-2022
Creating Interface	05-04-2022
Test the Project	10-04-2022
Project Report	19-04-2022