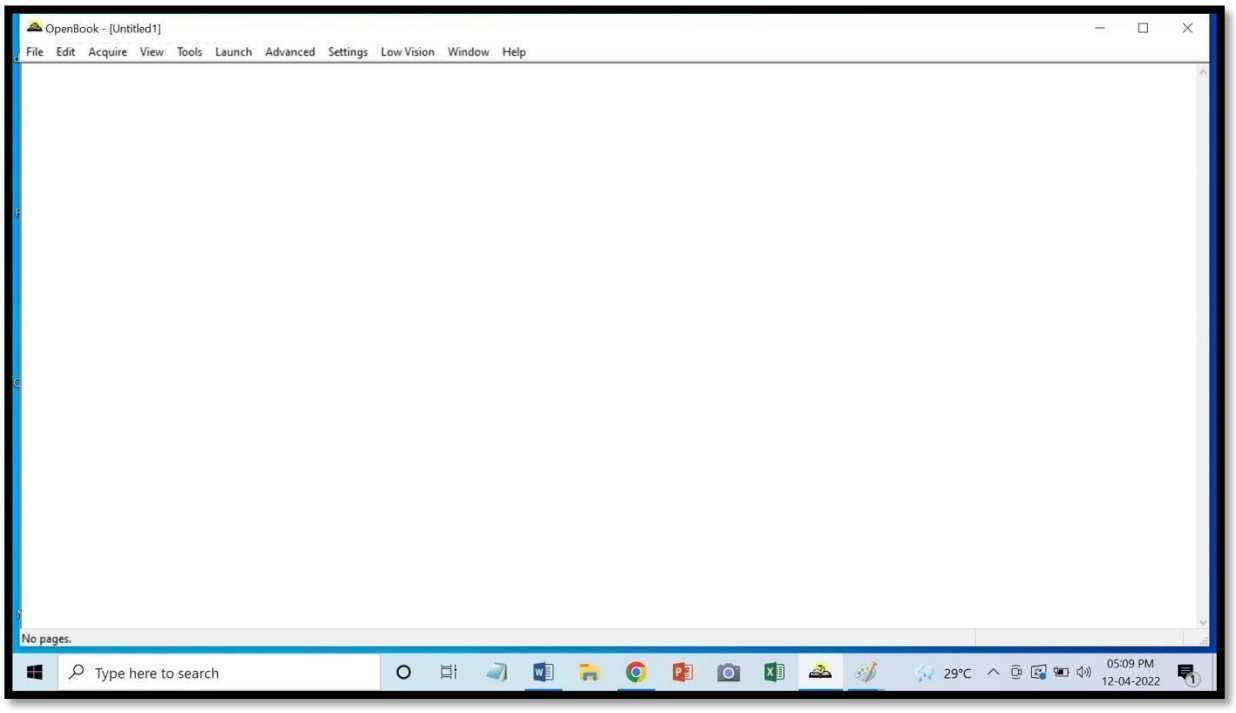
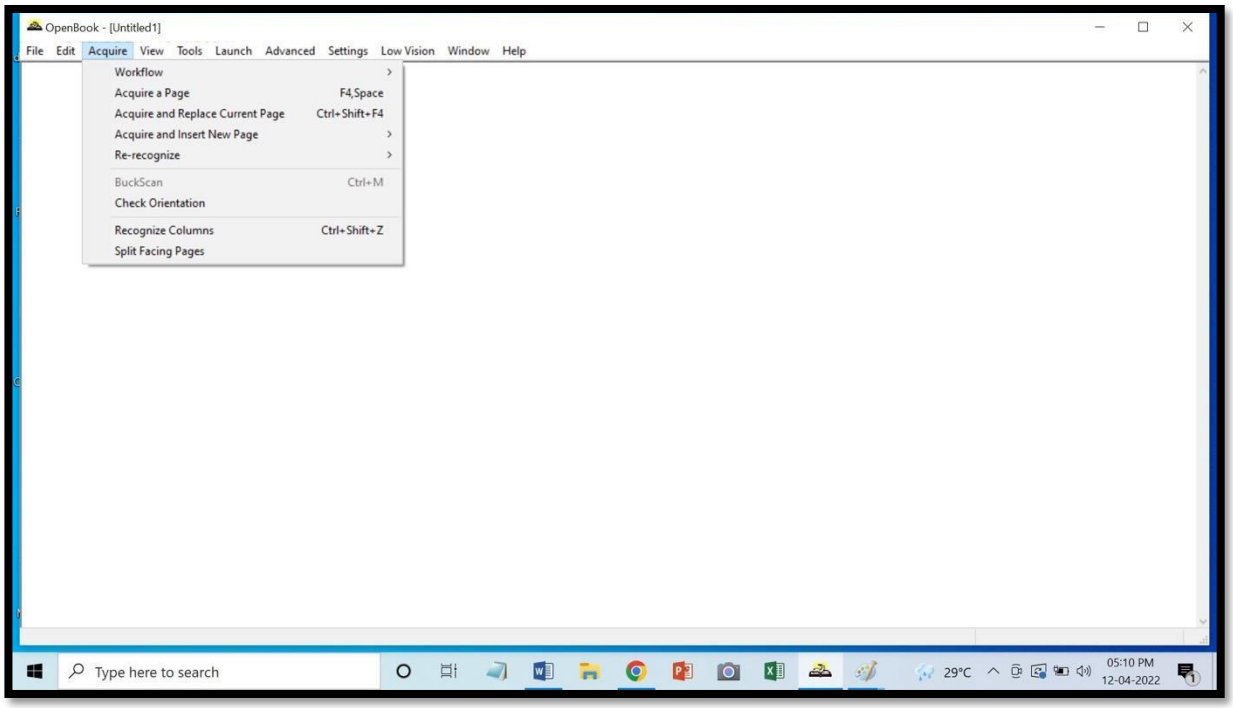
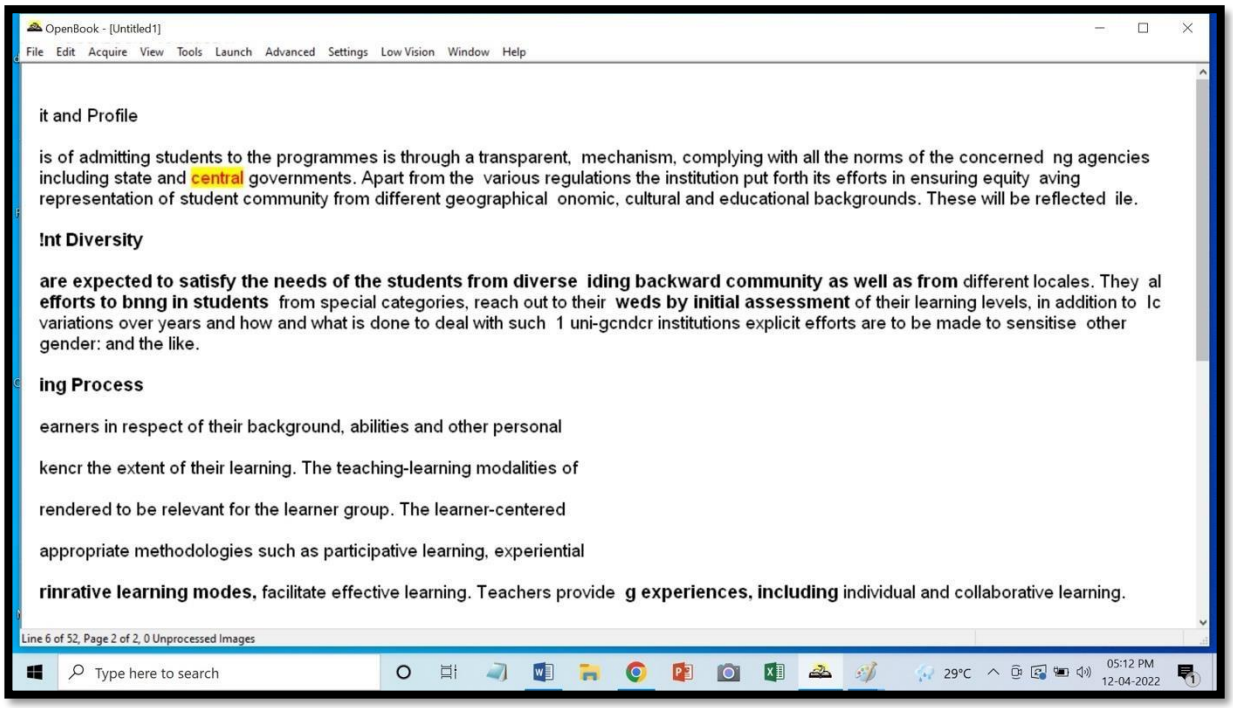
7.1.7 The Institution has disabled-friendly, barrier free environment:

S.NO	Details of the Software Procured for Providing the Assistance
1	OPEN BOOK SCANNING & READING SOFTWARE WITH PEARL HI-SPEED CAMERA
2	JAWS SCREEN READER
3	SOFTWARE DEVELOPED BY STUDENTS FOR DIVYANGJAN
4	TALKING BOOKS FOR DIVYANGJAN

OPEN BOOK SCANNING & READING SOFTWARE WITH PEARL HI-SPEED CAMERA

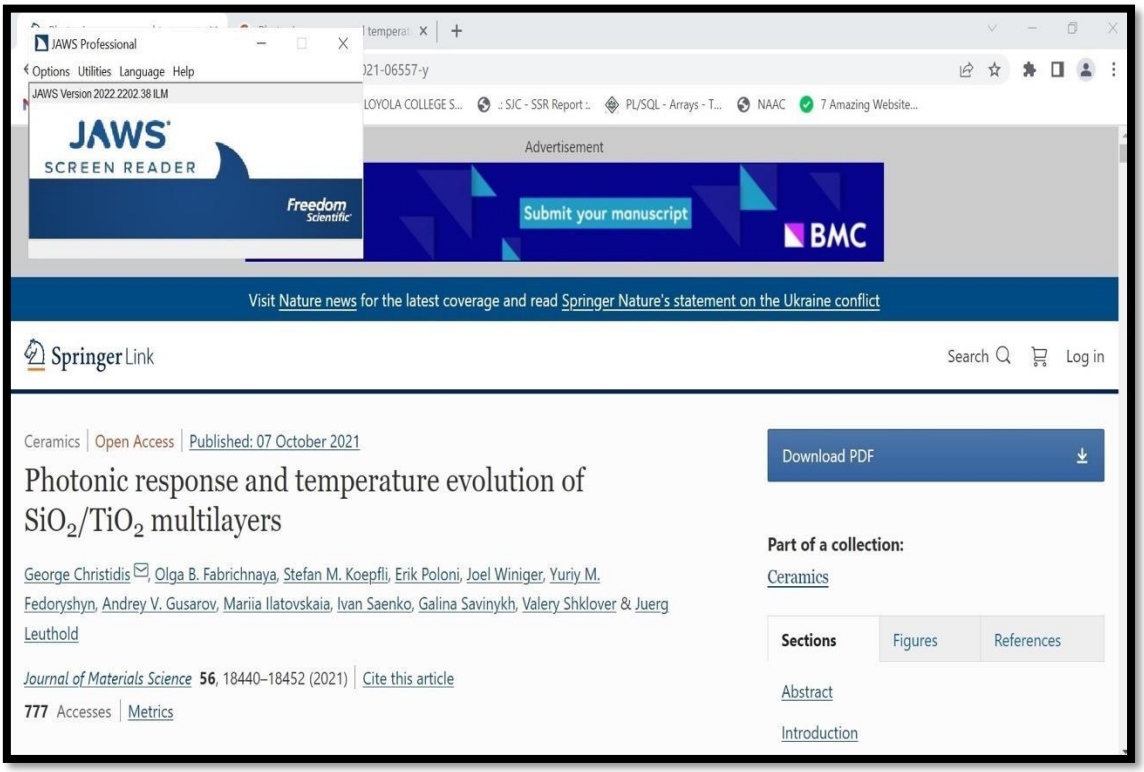


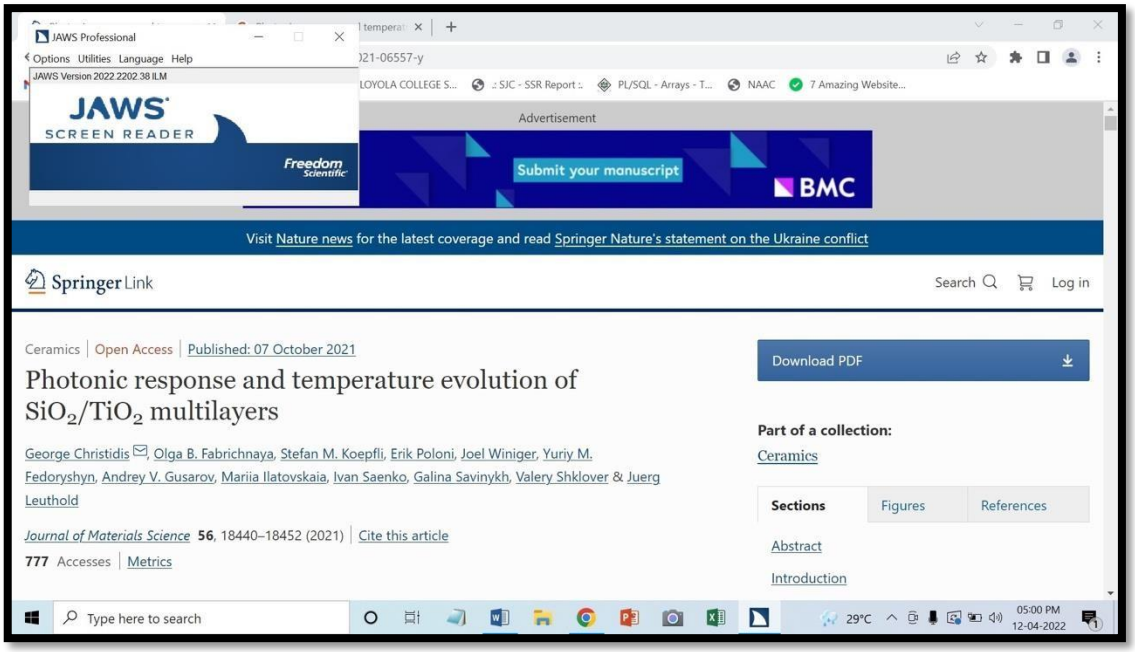




Screen Shot of Open Book Scanning & Reading Software with Pearl Hi-Speed Camera

JAWS SCREEN READER



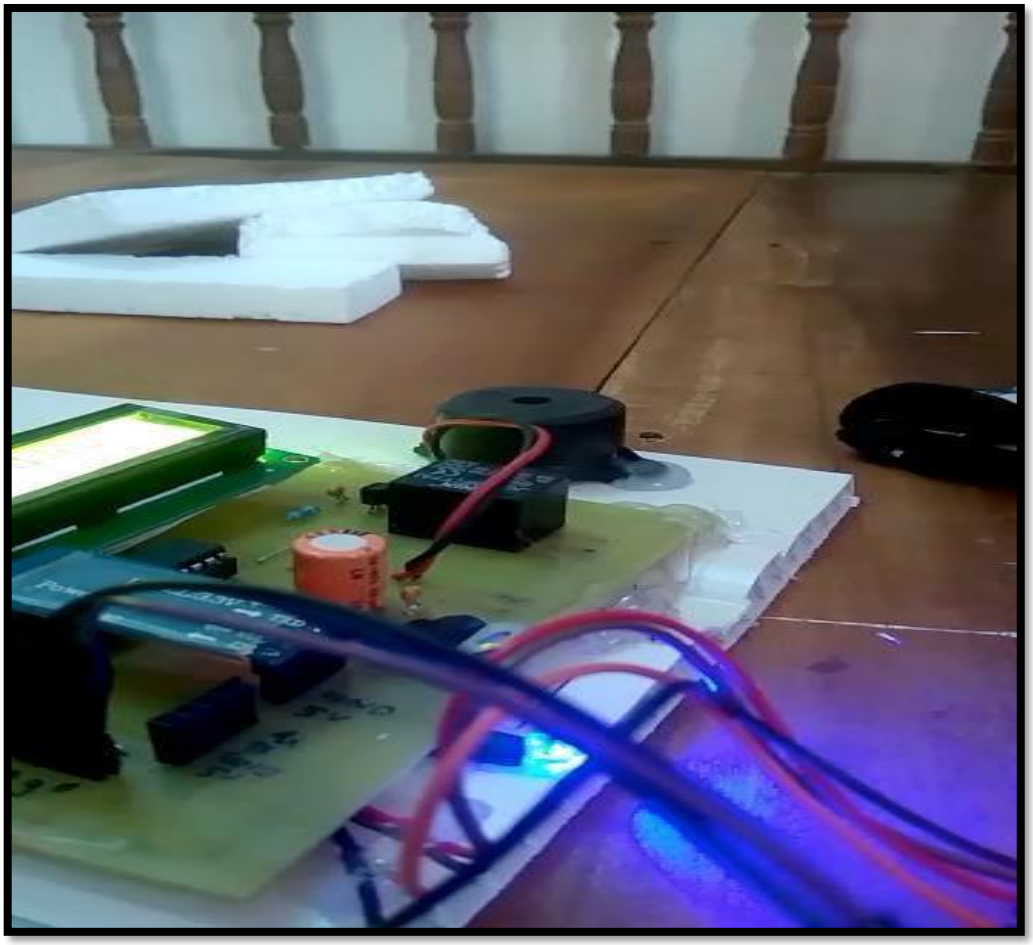


Screen Shot of Jaws Screen Reader Software

DIVYANGJAN FRIENDLY
EU

IOT Based Home Automation for Physically Challenged

The paper demonstrates to design a smart home system for physically disabled persons with the purpose of reduction of water and power consumption. The physically disabled persons require special assistance from caretakers or other persons to lead their normal life and even at home,it is not convenient for them to control the house apparatus system according to their wish. In this paper, a smart home automation system is implemented which consists of automatic control of lights to turn on in presence of human and turn off rest of the time as well as nodemu(esp8266) controlling ability along with automatic door lock and open system through web page also it controls by other person, automatic Water tap, automatic water tank fill-up and Solar charging system with the solar controller to reduce the power consumption. The project has been implemented using low-cost components and based on PIC platform with an aim to develop a system which will be effective to reduce water wastage in real time as well as the project will be able to reduce power consumption and utility bill by using renewable energy as the power source.

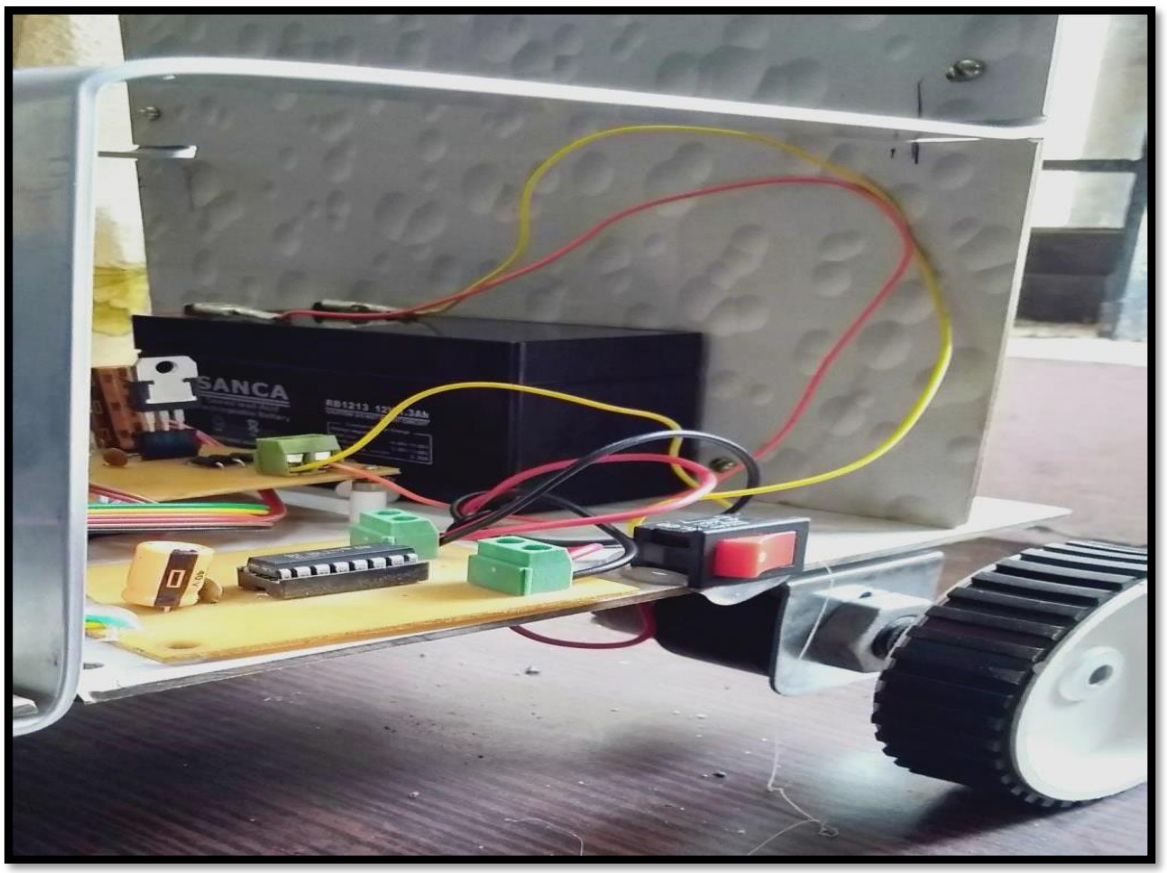


Voice and Gesture Controlled Wheel Chair

This Project presents a Voice and Gesture Controlled Wheelchair.

A Voice and Gesture Controlled Wheelchair makes it easy for physically disabled people who face difficulty in moving from one place to another in day today life. The powered wheelchair depends on motors for locomotion with the help of Gesture and Voice recognition given as the command. The Gesture movement is

recognized by accelerometer and with the use of android application and Bluetooth, the voice commands are transmitted to the processor and the information is being encoded in order to control the wheelchair in certain direction to which the user wishes to move.


SANCA

Assistive Technology for Paralysed People

Brain Computer Interface (BCI) is field of research which has gaineda lot of attention in these days. The main aim of this paper is to provide basic mobility for the elderly and incapacitate. Humans can interact with machines is significantly enhanced through inclusion of speech, gestures, and eye movements. The objective of this project is to develop an intelligent brain and eye controlled communication system which can control home appliance for paralyzed people who

can't control ordinary system. People suffering from these conditions can use their brain waves to control prosthetic devices or exoskeletons. The proposed project uses brain waves in combination with eye blink sensor to significantly enhance the ability of people with a disabled system to interact with assistive machines. These signals can be read by using a sensor named electroencephalogram (EEG). According to the readings interpreted by the device, we have included the automation of the patient's room by controlling the essential electrical equipment's like lights, fans, etc. Also, a SMS will be sent to the respective caretakers. The most essential requirements of the patient can be satisfied without delay and this helps the caretaker to assist the patient regularly.

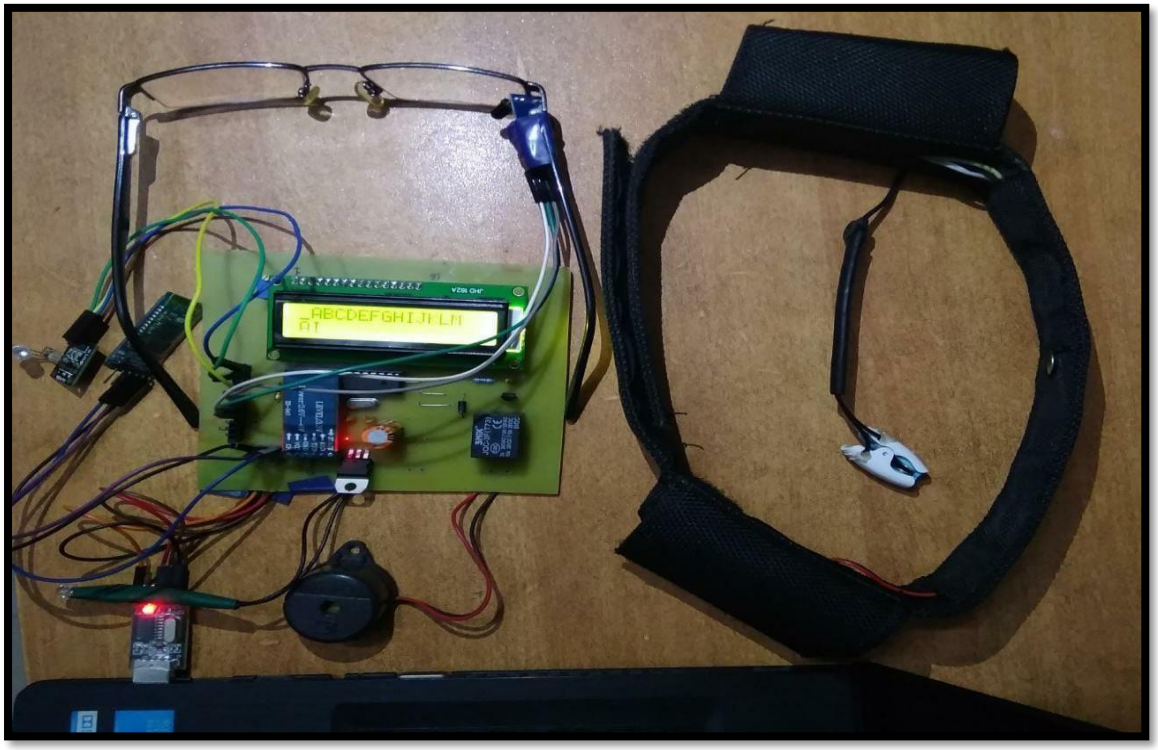
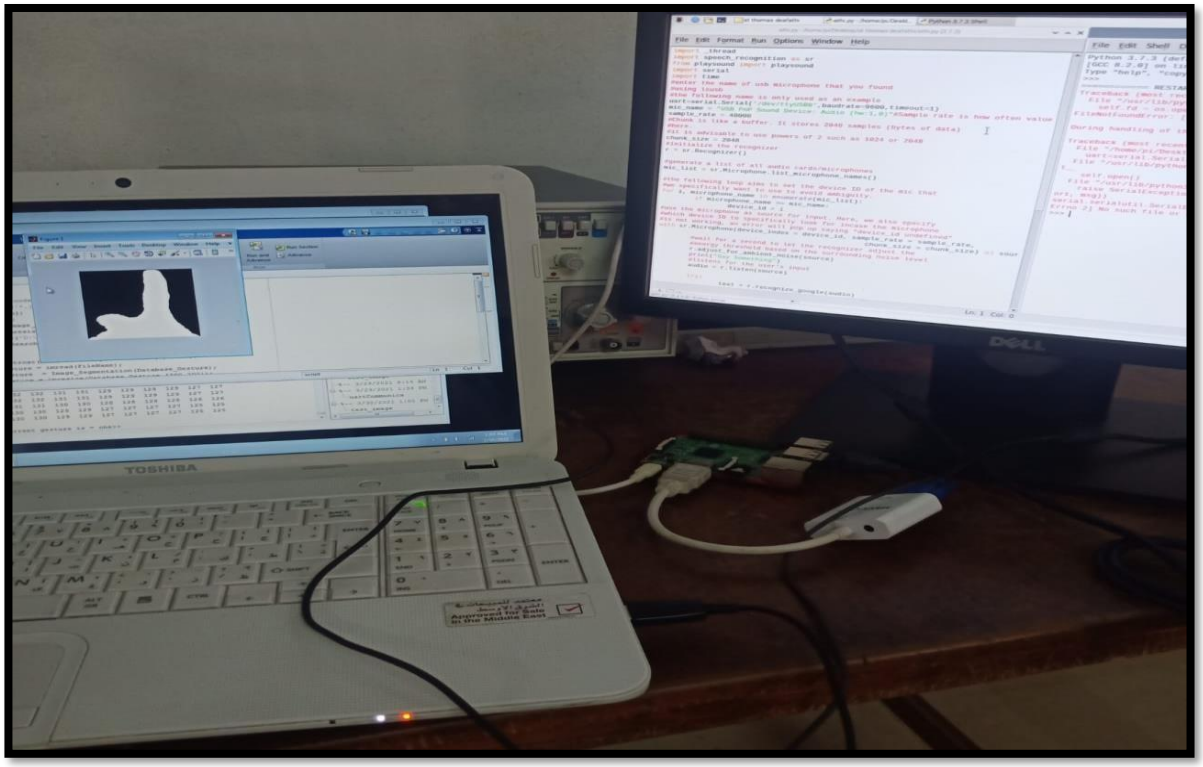


Image Processing Based Language Converter for Deaf and Dump People

Generally Sign language uses hand gestures for communication;it is used by the hearing and the speech impaired people to interact with others. But it is very difficult for the normal peopleto understand it, The gestures shown by the impaired people willbe captured and the corresponding text and voice output is produced as one way and the voice input by normal people is taken and the corresponding text will be displayed to them as

another. This system uses RASPBERRY PI kit as the hardware, where a Speaker and Microphone will be attached along with it. First the image acquisition is carried where it captures the input image and then image pre-processing is done to extract the foreground image from the background, then feature extraction is carried out to extract the necessary details. The extracted image is matched with the dataset and the corresponding voice output is generated for that gesture. Likewise, a microphone is used to capture the speech input of the normal people by using this method the communication gap between the impaired and normal people reduced


TOSHIBA
DELL

PROJECT REPORT

ON

SMART SYSTEM FOR BLIND

SUBMITTED BY

GOPIKA P

FOR THE AWARD OF THE

DEGREE OF MASTER OF SCIENCE (M.Sc.)

IN ELECTRONICS

(UNIVERSITY OF CALICUT)

DEPARTMENT OF ELECTRONICS

ST. THOMAS COLLEGE (Autonomous), Thrissur-680001

Affiliated to the University of Calicut

NAAC Grade (4th Cycle): 'A++' Grade & College with Potential for Excellence

APRIL 2023

PROJECT REPORT

ON

SIGN LANGUAGE TRANSLATOR

SUBMITTED BY
ALWIN GBELL GEEVAR, AAVANI V S, ABEENA K A, JOYAL JOHNSON, SNEHA JOY

For the award of the
Degree of Bachelor of Science (B.Sc.) in Electronics
(UNIVERSITY OF CALICUT)

DEPARTMENT OF ELECTRONICS

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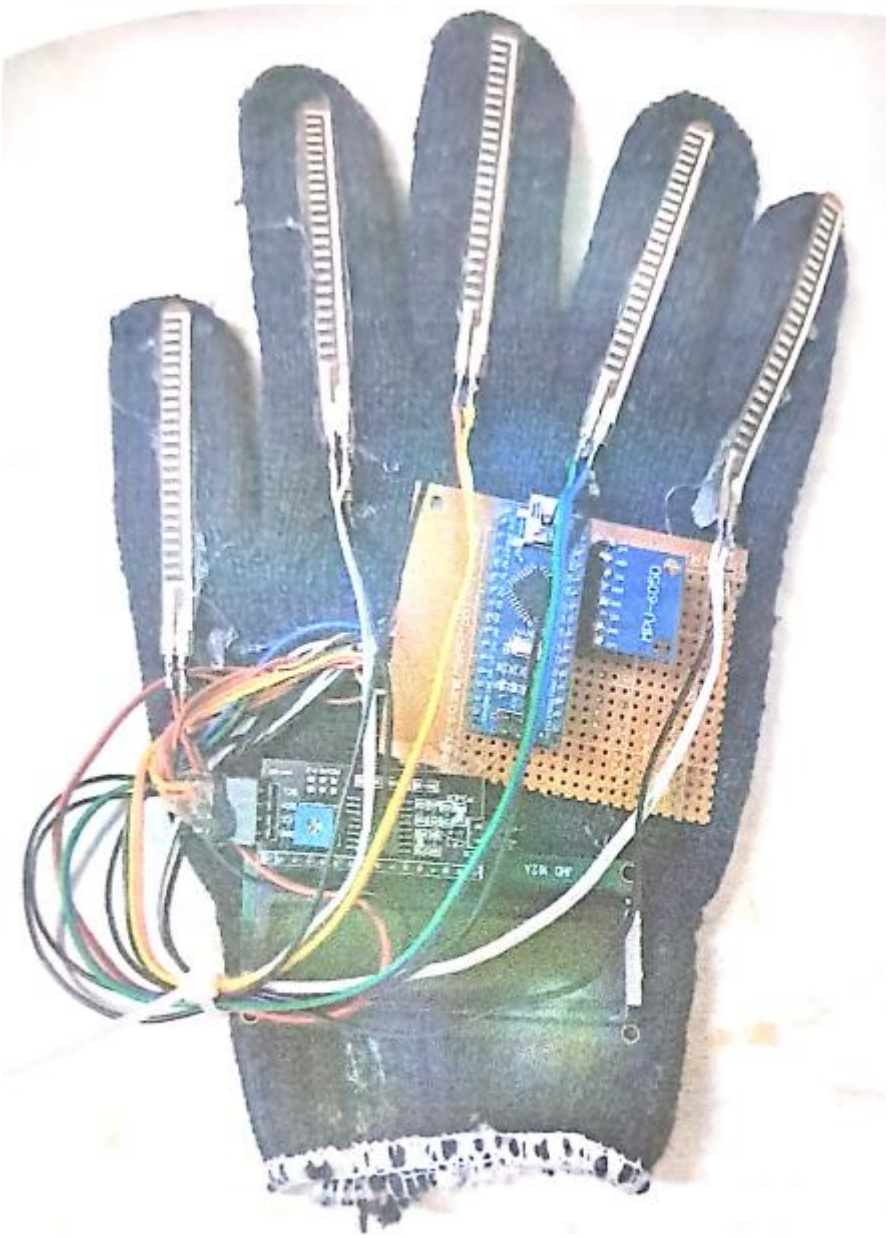
Affiliated to the University of Calicut
NAAC (4th cycle), A– – Grade & College with potential for Excellence

APRIL 2023



Flex sensor 3- Thankyou

4.3.3 Result-Thank You

Flex sensor 4- I am fine

Flex sensor 5- How are you

Flex sensor 2- Ok

4.3.2 Result-Ok

We have tested with five ...

a flex sensor forms a unique position, giving each position of gesture to generate a word. In the following table, we have got the result sets that represent the words for different gestures.

Flex sensor 1- Hello

4.3.1 Result-HELLO

PROJECT REPORT

ON

GESTURE CONTROLLED ROBOTIC ARM

SUBMITTED BY

ABEL A D	THAUSEL007
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MARCH 2023

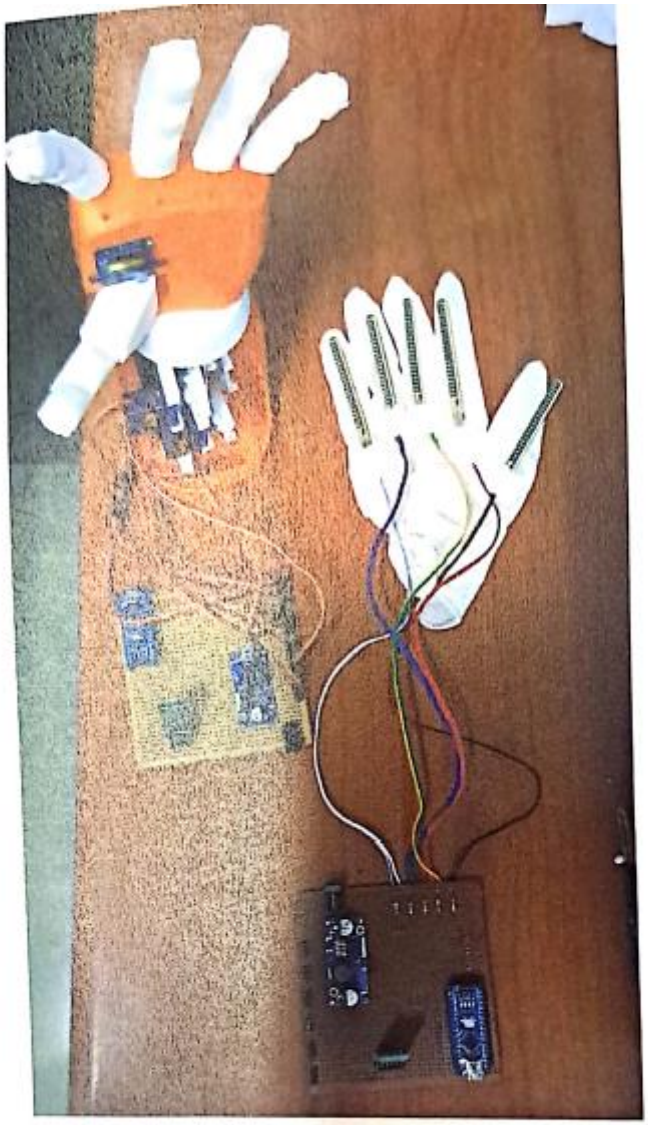

Fig.4.4 Gesture controlled robotic arm

The Gesture Controlled Robotic Arm. This cutting-edge technology combines the precision of robotics with the intuitiveness of human gestures, revolutionizing the way we interact with machines.

Designed with simplicity and efficiency in mind, our Gesture Controlled Robotic Arm responds to subtle hand movements, allowing users to effortlessly manipulate objects with precision and accuracy. Whether you're in a manufacturing setting, a research laboratory, or simply exploring the possibilities of human-machine interaction, this robotic arm opens up a world of possibilities.

Imagine the convenience of commanding the arm to perform intricate tasks with just a wave of your hand. No need for complex programming or cumbersome controls—simply gesture, and watch as the robotic arm follows your commands with grace and agility.

With its advanced sensors and responsive technology, our Gesture Controlled Robotic Arm offers unparalleled versatility and ease of use. Whether you're assembling delicate electronics, conducting experiments in a lab, or simply exploring the frontiers of robotics, this innovative tool empowers you to do more, with less effort.

Join us as we redefine the future of human-machine collaboration with the Gesture Controlled Robotic Arm. Experience the power of seamless integration between man and machine, and unlock new possibilities in productivity, precision, and innovation.

TALKING BOOKS

Link : https://stthomas.ac.in/talking-books/

Principal
St. Thomas College (Autonomous)
Thrissur - 680 001