KARPAGAM
COLLEGE OF ENGINEERING
Rediscover | Refine | Redefine
(Autonomous)

MINI PROJECT

Sign Language Glove Using Arduino

Presenter Details

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ABSTRACT

The Smart Glove helps people who can’t speak by showing their hand gestures as text on a display. It uses sensors on each finger to recognize movements, making communication easier and more accessible.

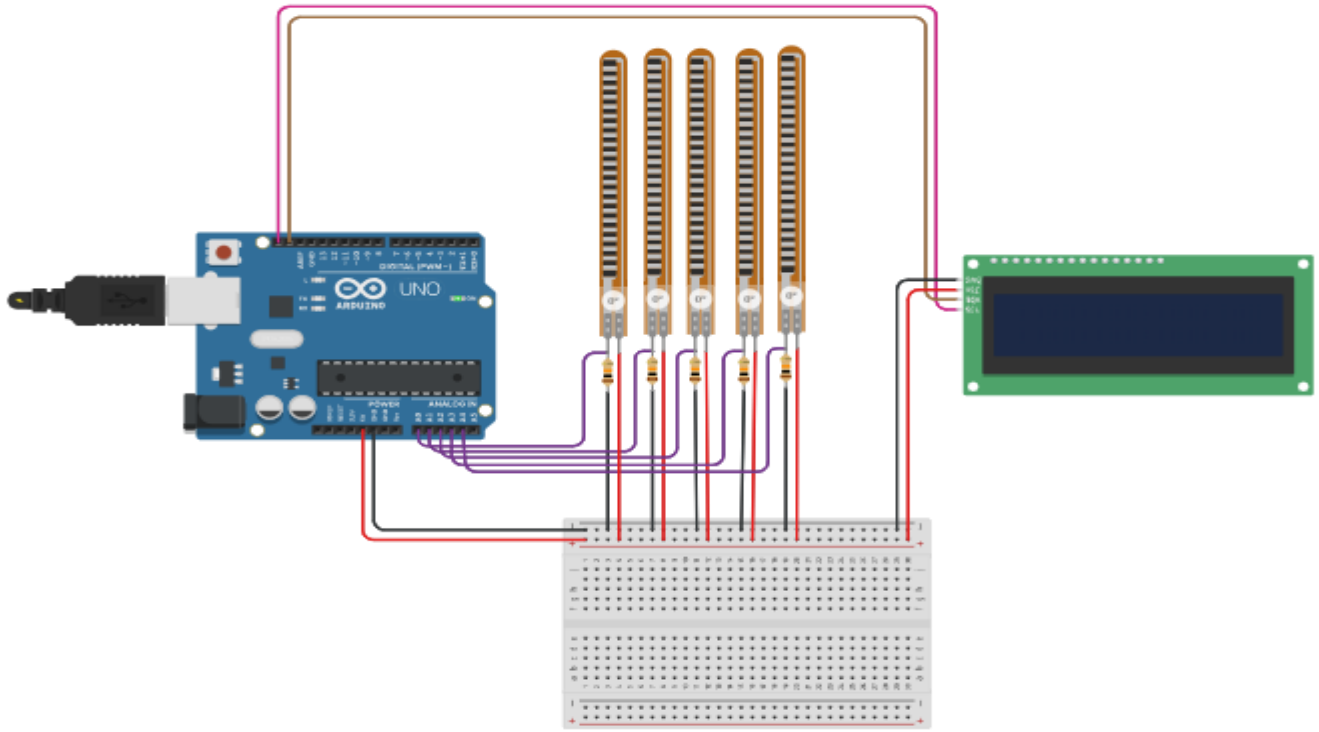
INTRODUCTION

The Smart Glove is a communication aid for individuals with speech impairments, translating hand gestures into text displayed on a screen. Equipped with finger sensors, it accurately detects movements, providing a simple and customizable way to communicate without spoken language.

COMPONENTS:

- Arduino Uno.
- LCD.
- Flex Sensor
- Resistor
- I2C Module

CIRCUIT DIAGRAM:



FEATURES:

ARDUINO UNO:

- The Arduino Uno is a tiny microcontroller board used for creating and controlling electronic projects.
- Here it processes the input from flex sensors and translates the hand gestures into text for communication.

FLEX SENSOR:

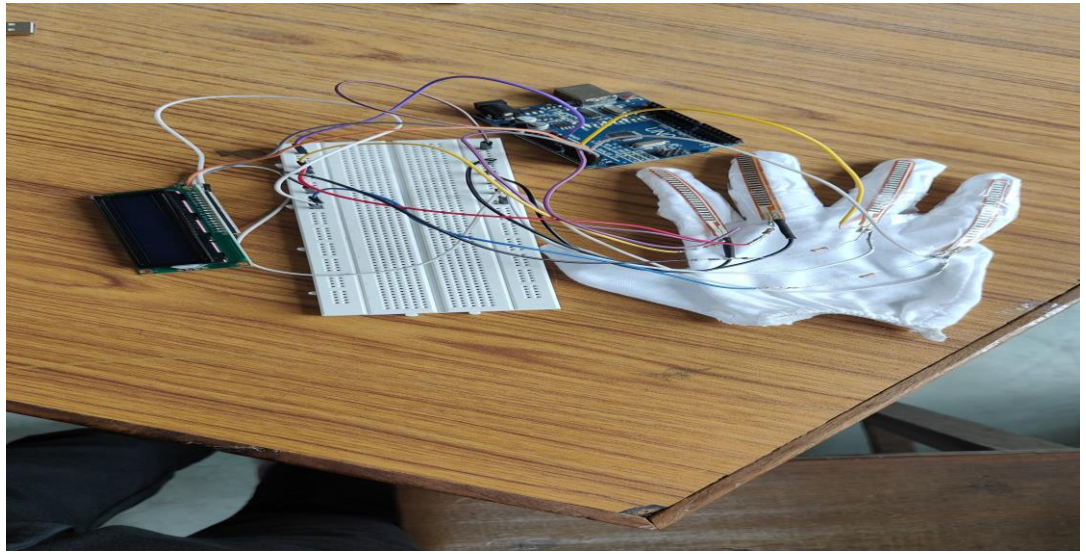
- A flex sensor is a device that detects bending or flexing.
- It changes its signal based on how much it bends.

FEATURES:

I2C(INTER INTEGRATED CIRCUIT):

- I2C uses only two wires (SDA and SCL) for communication, reducing pin usage.
- I2C supports multiple devices on the same bus, streamlining data exchange.

PHOTOGRAPHS



CONCLUSION:

- The Smart Glove translates hand gestures into text displayed on an I2C LCD, allowing individuals with speech impairments to communicate effectively.
- The integration of flex sensors allows for accurate gesture recognition, ensuring reliable communication for users in various situations.

REFERENCE:

https://youtu.be/7J9GLTyKoxc?si=KylR4fXru_P2IDVE

https://techatronic.com/final-year-project-for-ece-arduino-sign-language-glove/

https://youtu.be/60ch5FFG5nI?si=bk-HDs6cZ8U50LhL


THANK YOU