

# THE SIGN LANGUAGE RECOGNITION GLOVE

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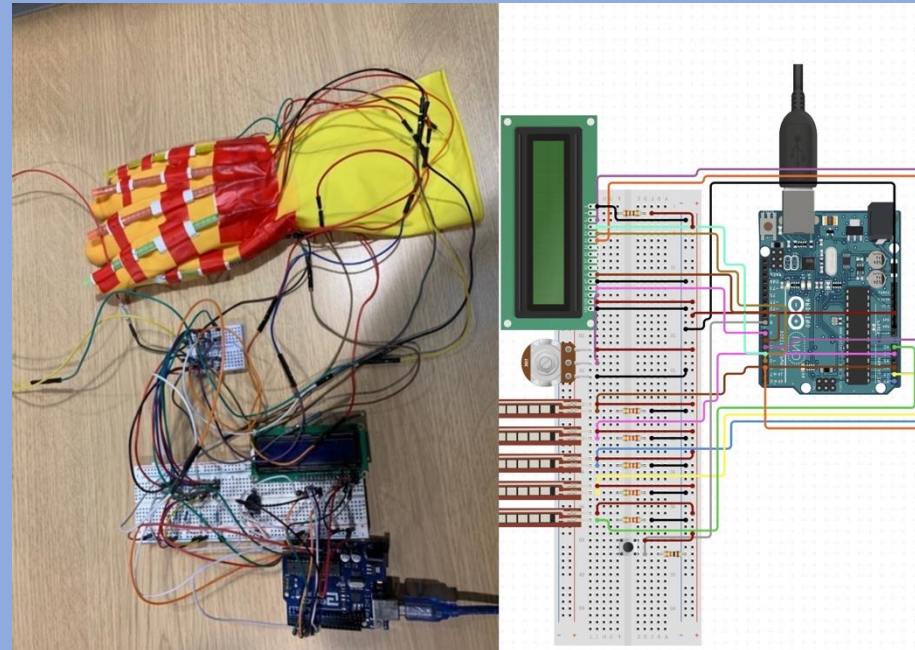
## Abstract

The aim of the project is to design a glove that would translate signs, made by mute or deaf people, into words displayed on a screen connected to the glove.

The sign recognition is achieved with the help of flex sensors that are attached on top of each finger of a latex glove. When the fingers are bended, the flex sensor change resistance which can be used to calculate the angle of the bend. When angles received from sensors match the angles already registered into the board, the Arduino Board send the result to be outputted on the LCD screen.

## Background

Communication is of paramount importance in today's data driven society, not only in extreme situations, but also everyday life. Communication between speakers and non-speakers of Sign Language can be problematic, inconvenient and expensive.



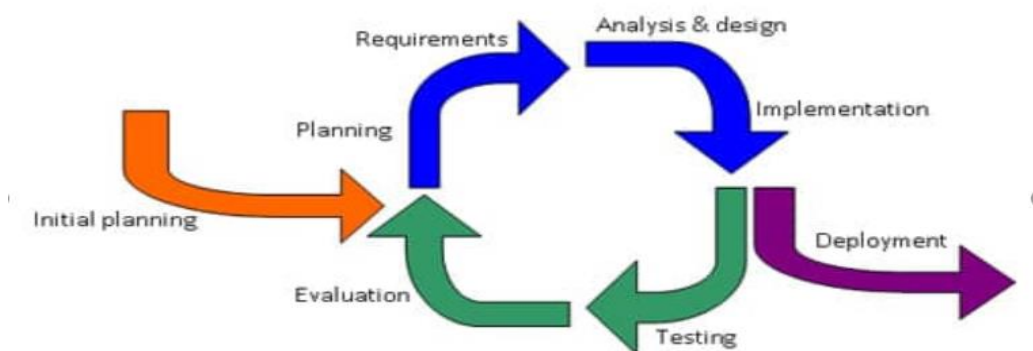
## Design and implantation

Flex sensors are attached on top of the fingers of a latex glove. They are wired into the circuit (shown in the above schematic) with the help of a breadboard that connects the other components of the circuit. Arduino UNO controller board is used to collect the information received from flex sensors, search for matching values and send output to LCD display. A potentiometer is used to adjust the voltage of the current that goes through the LCD screen which will display the results received.

## Methodology

This research will use literature review method, experimental research method, positivist philosophy method and deductive method will to verify that the design and implementation of the smart glove.

Besides, this topic will divide the task into several subtasks, and the techniques used for each subtask includes requirements analysis, design, implementation, testing, and evaluation. Therefore, the iterative model will be used for development method.



## Expected outcome

The author considers that the goals of the project, enabling gesture recognition, was achieved as all the letters were successfully recognized during the test.