**Somaiya Vidyavihar University**
**K. J. Somaiya School of Engineering, Mumbai-77**
**Department of Science & Humanities**
**Project Based Learning Lab**

# SENSORED GLOVE FOR SIGN LANGUAGE TRANSLATION

Division: P2-2 Group No: 6

1. **Team Members:**

| Sr No. | Roll no. | Name |
|---|---|---|
| 1. | 16010424103 | Apoorva Rajpurohit |
| 2. | 16010424104 | Sadhana Ramesh Kumar |
| 3. | 16010424105 | Rimjhim Ranjan |
| 4. | 16010424106 | Nidhi Rasalkar |
| 5. | 16010424107 | Bhoomi Sahay |

2. **Final Problem Statement:**

   This project aims to develop a wearable sensor glove that translates sign language gestures into text in real-time. Using flex sensors and an accelerometer, the glove captures hand movements, processes the data via Arduino Nano R3, and sends it to an Android app via Bluetooth, which converts the gestures into text. The goal is to bridge the communication gap between hearing-impaired individuals and others.

3. **Proposed idea:**

   In this project, we propose to design and develop a smart wearable glove integrated with multiple flex sensors, which can help translate language gestures into readable output. The main aim is to assist people with speech or hearing disabilities to communicate easily with others.

Drive Link for Videos:
https://drive.google.com/drive/folders/1Zwkmpcionbk1KfdoYDJumv0189jVd8Ol?usp=sharing

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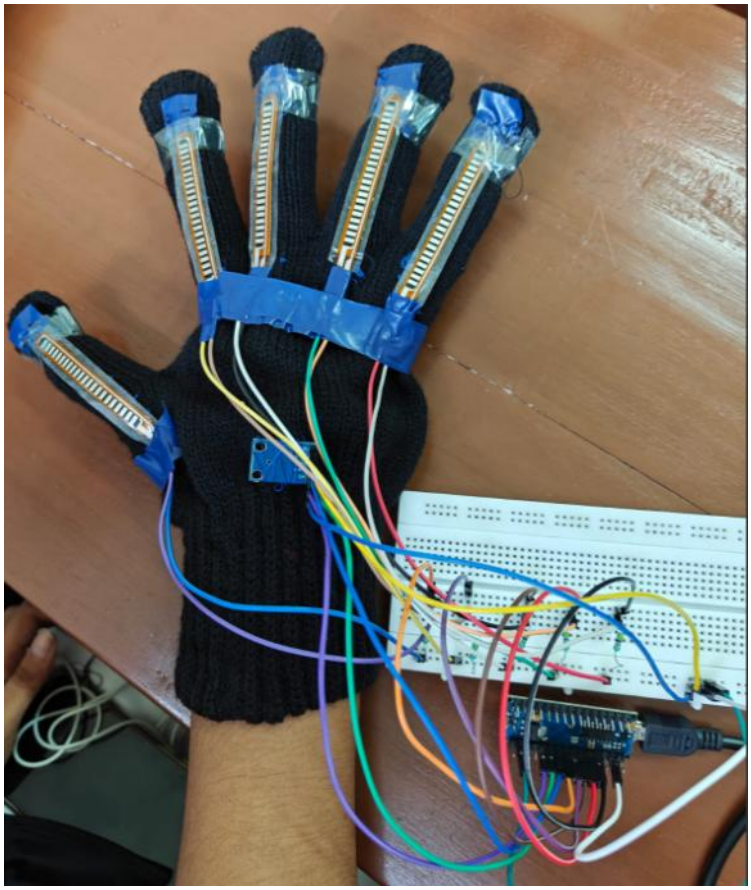
## 4. Photo of developed solution:



## 5. Total Expenditure:

| Name of Component | Quantity | Approximate cost |
|---|---|---|
| Arduino Nano R3 | 1 | 285 |
| ADXL335 | 1 | 585 |
| F/F jumper wires | 20 | 40 |
| M/F jumper wires | 10 | 20 |
| HC-05 | 1 | 285 |
| Flex sensor | 5 | 1425 |
| 10 K ohm resistor | 10 | 10 |
| Bread board | 1 | 65 |
| Nano Data Cable | 1 | 65 |
| | | Total Cost= 2780 |
| | | Discount= 30 |
| | | Final Cost= 2750 |