

# Progress Presentation-I

e-Yantra Summer Internship-2016  
*Sign – LanguageInterpreter(LeapMotionSensor)*

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IIT Bombay

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## Sign-Language Interpreter (Leap Motion Sensor)

### ■ Objective

- This project aims to help deaf and dumb people to communicate with normal person who are not aware of sign language.

### ■ Deliverable

- Map words with pre-recorded speech.
- Design Tutorial and Documentation of project with video demonstration.

# Overview of Task

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## Overview of Project

## Overview of Task

## Task Accomplished

## Task Accomplished

## Task Accomplished

## Task Accomplished

## Challenges Faced

## Future Plans

## Thank You

Task No.	Task	Deadline
1	Get Familiar with Leap Motion Sensor and Galileo Board	3 day
2	Interfacing and Testing of Leap Motion Sensor. Generation of data for different hands/fingers used	2 day
3	Individual hand gesture for the alphabets should be recorded	3 day
4	Record gesture for words and calibration of leap motion sensor for sign language recognition	3 day
5	Communication the data between Leap Motion Sensor and Galileo board via local network	1 day
6	Interface mp3 module with Galileo Board and map recognized words to pre-recorded speech.	4 day
7	Design Tutorial and Documentation of project with video demonstration.	5 day

# Task Accomplished

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Challenges Faced

Future Plans

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- Task 1 (Get familiar with sensor and board)
  - In this task Linux was installed on Galileo board and run some basic programme on board.
  - Seen stuff in Leap Motion Control Panel and see applications there.
  - Search about how to develop with Leap Motion Sensor and found Leap SDK.
- Task 2 (Generation of data for different hands and fingers)
  - In this task I have studied about Leap SDK and it's Library
  - And make simple programme for displaying data related position and direction of hands and fingers

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Challenges Faced

Future Plans

Thank You

- Task 3 (Individual alphabet recognize)
  - In this task one programme is made in which we need to first load pose with one alphabet and then we can recognize that alphabet by performing that pose
- Task 4 (Record gesture for words)
  - Here one interface is used for recording and recognizing gesture for particular word or sentence.
- Task 5 (Communication between Leap and Galileo Board)
  - Here Websocket on localnetwork is used to transmit data between Leap and Galileo.

# Task Accomplished

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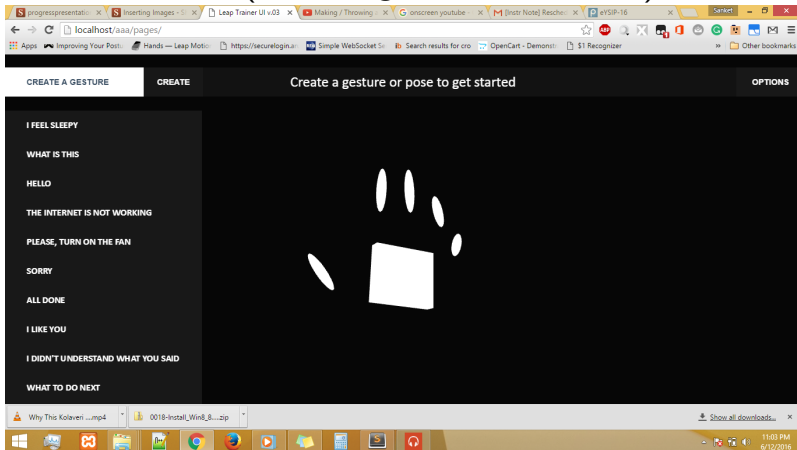
Task  
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## Task 4 (Record gesture for words)



# Task Accomplished

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Challenges Faced

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## Task 4 (Record gesture for words)



# Challenges Faced

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Challenges Faced

Future Plans

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- Recording and Recognizing Gestures in Leap motion Sensor
- Installing Windows IOT on Galileo
- Making sentence from basic words generated from system



# Future Plans

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Challenges Faced

Future Plans

Thank You

- Interfacing with MP3 module is remaining in my task
- Making sentence generation more reliable
- Load more words and make system more accurate..
- Making robotics hand which will be operated by moving our hand.

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Future Plans

Thank You

THANK YOU !!!