

Brain Controlled Robot

Overview : Mind controlled robotics, which focus on receiving signal from brain using EEG sensor, writing software for processing the signal at computer, and instructing a robot for performing a task through microcontroller and wireless link.

Day 1

Session 1 :

- Introduction
- Starting with embedded systems
- AVR Microcontroller Programming
- Arduino jargon and terms
- Arduino Basics
- Arduino Architecture
- Arduino board layout. What are the resources available

Session 2 :

- H-Bridge
- Bluetooth Module
- DC Geared Motors
- EEG (Electroencephalography)
- Brainwaves & its types.
- Sensor to record Brainwaves
- Wireless Communication

Day 2

Session 1:

- Programming fundamentals (C language)
- Robot Assembling
- Development & Testing on Arduino Board
- Example 1: Simple LED Program
- Example 2: LED Blinking
- Interfacing Bluetooth Module

Session 2:

- Robot 1: Android Smartphone Based Voice Controlled Robot
- Robot 2: Mind Controlled Robot
- Robot 3: Speed Control Based on Mind Waves
- Robot 4: Blink Controlled Robot.

Session 2:

- Query Session
- Certificate Distribution