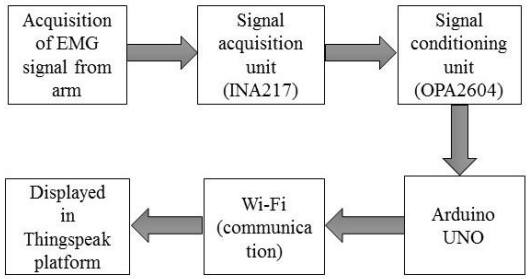
Dr. N.G.P. INSTITUTE OF TECHNOLOGY

Coimbatore-641048

DEPARTMENT OF BIOMEDICAL ENGINEERING

Wireless Biosignal Acquisition Electrode Module for EMG



During contraction &relaxation of arm

Description of the Project:

- The developed module to evaluate neuromuscular disease eliminates the probe connection between electrode and equipment thus improves mobility of patient (baby/athlete/ handicapped) and it reduces improper connection of probe with electrode.
- The doctors & technicians can visualize the patient data remotely.
- Quantitative method is used to measure the activity of muscle by signal acquisition, conditioning unit and interfaced with the Wi-Fi module for communication.
- Analog signal is obtained and converted into digital value by Arduino, program is designed with Arduino language and incorporated in the board.
- Thus extracted value from the EMG circuit is transmitted by Wi-Fi. The amplitude value in respect to time is calculated.
- Thingspeak platform is used for representing the envelope of discrete output value based on activity of muscle. The contrast phenomenon is with the size of the electrode that fixes in the arm.

Tools Used: Arduino, ThingSpeak

Project Guide
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