

HEALTH TRACKING SYSTEM

A PROJECT REPORT

Submitted by

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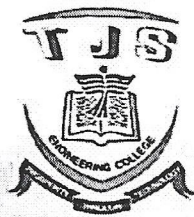
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*In partial fulfillment for the award of the
degree of*

BACHELOR OF ENGINEERING

IN

ELECTRONICS AND COMMUNICATION ENGINEERING



T.J.S. ENGINEERING COLLEGE, PERUVOYAL, CHENNAI



ANNA UNIVERSITY: CHENNAI 600 025

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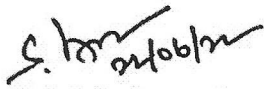
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BONAFIDE CERTIFICATE

Certified that this project report "HEALTH TRACKING SYSTEM" is the Bonafide work of the following students

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Who carried out the project work under my supervision.


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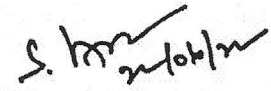

SIGNATURE

Mrs. C.SHALINI

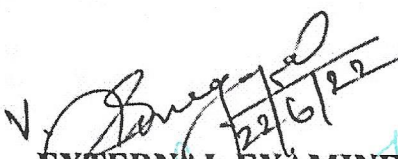
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INTERNAL EXAMINER




EXTERNAL EXAMINER

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ABSTRACT

In these recent years, people are much more concerned about their health as diseases arising day by day are more. Hence it is very much important to monitor the health. This system presents the design and implementation of IOT based health monitoring system which incorporates temperature and pulse rate sensors, blood pressure, respiratory. The patient's body will be monitored continuously and the doctor can know about the patient's condition while sitting somewhere in front of a computer screen. Whenever the condition of the patient goes abnormal an alert will be sent to the doctor through the mobile app so that he can diagnose the problem immediately which helps to save patient's life. The main purpose of this project is to inform the doctor about the patient's health condition time to time and if any abnormality occurs, the doctor can take the best step immediately



A handwritten signature in blue ink, appearing to be 'J. K. S.', written over the printed name of the principal.

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UNIT I BIO POTENTIAL GENERATION AND ELECTRODES TYPES

Origin of bio potential and its propagation. Types of electrodes - surface, needle and micro electrodes and their equivalent circuits. Recording problems - measurement with two electrodes

UNIT II BIOSIGNAL CHARACTERISTICS AND ELECTRODE CONFIGURATIONS

Bio signals characteristics – frequency and amplitude ranges. ECG – Einthoven’s triangle, standard 12 lead system. EEG – 10-20 electrode system, unipolar, bipolar and average mode. EMG– unipolar and bipolar mode.

UNIT III SIGNAL CONDITIONING CIRCUITS

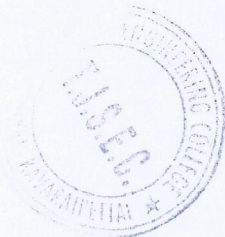
Need for bio-amplifier - differential bio-amplifier, Impedance matching circuit, isolation amplifiers, Power line interference, Right leg driven ECG amplifier, Band pass filtering

UNIT IV MEASUREMENT OF NON-ELECTRICAL PARAMETERS

Temperature, respiration rate and pulse rate measurements. Blood Pressure: indirect methods - Auscultatory method, direct methods: electronic manometer, Systolic, diastolic pressure, Blood flow and cardiac output measurement: Indicator dilution, and dye dilution method, ultrasound blood flow measurement.

UNIT V BIO-CHEMICAL MEASUREMENT

Blood gas analyzers and Non-Invasive monitoring, colorimeter, Sodium Potassium Analyser, spectrophotometer, blood cell counter, auto analyzer (simplified schematic description).



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