IOT HEART ATTACK DETECTION & HEART RATE MONITOR

A Project Work Submitted to Fatima College (Autonomous) Affiliated to

Madurai Kamaraj

University in partial fulfillment of the requirements for the

Degree of Bachelor of Science in Computer Science

Submitted by

M. Durga(2021B41)

DEPARTMENT OF COMPUTER SCIENCE

FATIMA COLLEGE(Autonomous)

Re-Accredited with 'A++' Grade by NAAC (IV Cycle)

Mary Land, Maduari-18

MARCH-2024

FATIMA COLLEGE(AUTONOMOUS), MADURAI – 18

DEPARTMENT OF COMPUTER SCIENCE

This is to certify this project entitled **"IOT HEART ATTACK DETECTION & HEART RATE MONITOR"** is a Bonafide record of the project work done by **M. Durga (2021B41)** in partial fulfillment of the requirement for the award of the Degree of **BACHELOR OF SCIENCE in COMPUTER SCIENCE.**

Submitted for the Via-Voice Examination held on **25.03.2024**

B. Margaret Mary
INTERNAL EXAMINER

25/3/24
EXTERNAL EXAMINER

DECLARATION

I hereby declare that the project entitled **"IOT HEART ATTACK DETECTION & HEART RATE MONITOR"** is a project report of the original work done by me. This project work is submitted to Fatima College (Autonomous, Affiliated to Madurai Kamaraj University) in partial fulfillment of the Degree of Bachelor of Science in Computer Science during the academic year 2023 – 2024.

I declare that this project work or any thereof has not been submitted for getting any Degree or Diploma from any University or College.

M. Durga.

Signature

Place: **Madurai**

M. Durga (2021B41)

Date: 25.03.2024

Embuzz TECHNOLOGIES

29th Feb, 2024

To
The Head of Department,
Department of Bachelor Of Computer Science,
Fatima College (Autonomous),
Madurai.

Dear Sir / Madam,

Sub: Completion for Project Work.

We are pleased to inform you that **Ms. Durga M** (Reg. No: 2021B41), student of final year **Bachelor Of Computer Science** from **"Fatima College (Autonomous), Madurai"** has undergone training and guidance for the project titled **"IOT Heart Attack Detection & Heart Rate Monitor"** from Nov 2023 to Feb 2024 on the Technology of Embedded Systems and IoT in our Organization. They completed his project work successfully with good conduct.

Thanking You,

EMBUZZ TECHNOLOGIES PRIVATE LIMITED COIMBATORE-4

M. Amarnath Karthic

Amarnath Karthic M - Director

Embuzz Technologies Private Limited

ABSTRACT

Heart rate monitoring is essential for individuals with cardiovascular conditions, athletes optimizing performance, and anyone interested in maintaining overall health. Traditional methods of heart rate monitoring often require cumbersome equipment and intermittent measurements, limiting their effectiveness in providing timely insights into heart health. The integration of IoT into heart rate monitoring systems addresses these limitations by enabling real-time data collection, analysis, and intervention.

The Internet of Things (IoT) has emerged as a transformative force across various domains, reshaping industries and enhancing quality of life. In the realm of healthcare, IoT technologies offer unprecedented opportunities for remote monitoring, early detection, and personalized care. Heart rate detection and monitoring, a critical aspect of health management, can greatly benefit from IoT solutions by enabling continuous, non-intrusive monitoring of cardiac activity.

This project aims to leverage IoT principles and technologies to develop a robust heart rate detection and monitoring system. By combining state-of-the-art sensors, microcontrollers, and cloud-based analytics, the system offers a seamless and efficient means of monitoring heart rate patterns.

Through continuous data collection and analysis, individuals can gain valuable insights into their cardiovascular health, allowing for early detection of abnormalities and proactive intervention.

The significance of this project extends beyond individual health monitoring. By aggregating anonymized heart rate data on a larger scale, healthcare providers and researchers can identify population-level trends, evaluate treatment efficacy, and contribute to advancements in cardiovascular health management.