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## FINAL YEAR PROJECT

Preference # 2

# Wearable Health Monitoring Device for Patients & Elderly People

## OVERVIEW

Healthcare holds a very high priority in human lives. The Patients need a lot of dedicated care and monitoring in order to recover and maintain good health. Same applies to elderly people who have health issues and require monitoring most of the time.

This project focuses on the development of Smart monitoring device that could read health data in realtime and perform necessary actions based on smart algorithms. Furthermore, the area of study covers Development of a Data Logging system where the Wearable sensor device could transmit data to a connected host (Mobile Phone) over Bluetooth.

This makes for a good record of health stats and analyzing the data to identify any unusual behavior and push notifications to the user or Caregivers. In case of severe threat (e.g stopping of heartbeat), the system could raise an alarm and report to emergency contact numbers.

## OBJECTIVES

The Wearable Health Monitoring Device aims to achieve following Objectives:

### PRIMARY OBJECTIVES

1. Read Oxygen Saturation Level, body temperature and HeartBeat data
2. Read Environmental data (Temperature and Humidity)
3. Transmit data to a host device over particular interval of time
4. Mobile application to Receive Data and maintain the record
5. Use smart algorithms to detect the level of threat & Push Notifications to the user

6. Sound an Alarm, Report to emergency Contact numbers with threat data

#### SECONDARY OBJECTIVES

7. Read Blood Glucose level (For Diabetes Patients).
8. Low Cost, Highly Efficient and Modular design suitable for end user and adaptable by the market

This project fulfills the United Nations Sustainable Development Goals **SDG-3** representing Healthcare and wellbeing.

#### Development Platforms & Technologies:

