Kaizener's Makeathon

IoT-Based Fitness Tracker: ESPFit

-Team Wubba Lubba Dub Dub

Core Idea:

To build an IoT fitness-tracking watch, that monitors, records and uploads user health data to a dedicated server on the Internet. It can also be used for basic time functions, such as timezone support, timer and stopwatch function.

Implementation:

The entire system will be based on the ESP-12E Wi-Fi chip. Since this board has 4MB of flash memory, it will be possible to implement an entire system on this board itself, without the need for another micro-controller/memory chip.

Sub-Modules:

1. ESP-12E Wi-Fi Module
2. Pulse Oximeter Sensor
3. OLED I2C Display
4. GY-521 I2C 3-Axis Gyroscope cum Accelerometer
5. Li-Ion Battery and Charger+Protection Circuit

Project's Motivation:

To build a DIY, cost-effective fitness tracker using the ubiquitous and versatile ESP module, and also to learn how commercial fitness trackers work and implement them in a customizable manner.