

# **iLife - Emergency Health Monitoring System Pilot Study**

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## **Goal of the project:**

- Integration of multiple wearable devices using a generic application so that all data are made accessible from a single application.
- Simple and user friendly interface.
- Detection of any emergency situations based on analysis of data collected.

## **Type of data to be gathered:**

- Personal Information such as name, age, weight, gender and frequency of exercising is collected to create the users' profile.
- Heart rate, calorie count, distance covered, steps travelled is collected or fetched from each device that user wants to add on to the application.
- Age, Heart rate fluctuation data will be used to detect anomaly and trigger the emergency alert if needed.

## **Participants:**

- Anyone who uses wearable devices to monitor their day to day activities.
- Doctors and medical practitioners who use such data for analyzing various patients exercising history and the overall wellbeing.
- People who need a generic application for all the devices they own.

## **Volunteers:**

- Students on campus who own a wearable device.
- Any willing participant who wants to try out the application.

## **Consent of use:**

- The volunteers and the participants will be required to sign a consent form agreeing that the personal data that have been gathered will not be misused and the data will be used for research alone.
- The participants are required to join voluntarily without any qualms.
- The participants must provide accurate information and describe any physical conditions or complications, that will make them ineligible to participate in anyway.
- Data required for the project will only be collected, data such as financial or any sensitive information will not be collected from the participants.
- Participants with disabilities will be helped by volunteers to take part in the experiment.

## **Data gathering questionnaire:**

- Do you wear any wearable devices and have you used more than one device?
- How hard is for you to configure a new device whenever you make a switch?
- Does your device have any emergency contact option when you find yourself in difficult circumstance?
- Does your current application give you a way to consider your historical data and how hard is it for you to make sense of it?

## **Data gathering techniques used:**

- Personal interview
- Online form

## **Analysis of data and feedback:**

We have two data sets – One acquired directly from the participant (through interviews and questionnaire) and the other from the experiment. We will be collecting 3 readings from each person:

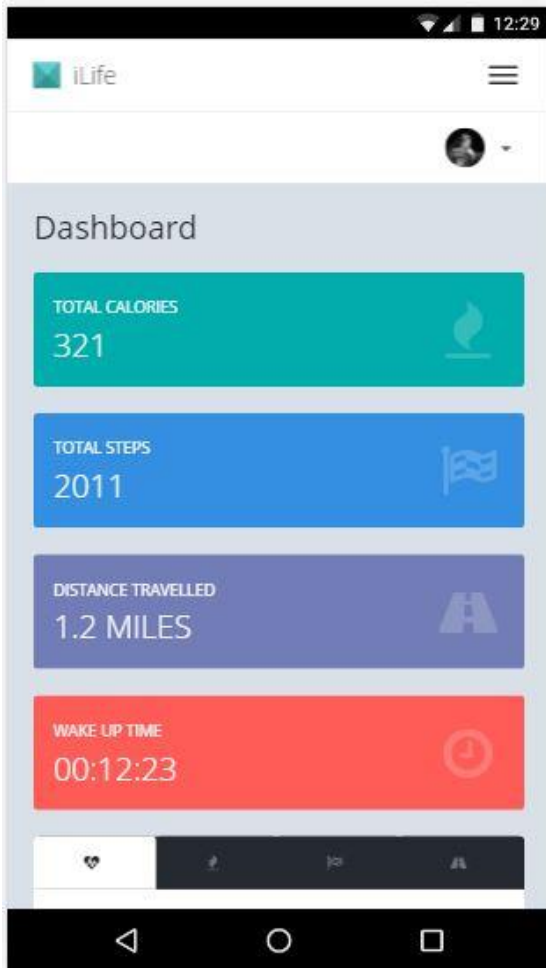
- Resting heart rate,

- Average heart rate,
- Highest heart rate.

This would help us to accurately detect emergency situations and take counter actions. Besides this, we will be working on deriving the following:

- Pie chart of what percent of people use wearable
- Pie chart or some kind of visualizing graph illustrating the responses to the questions asked.

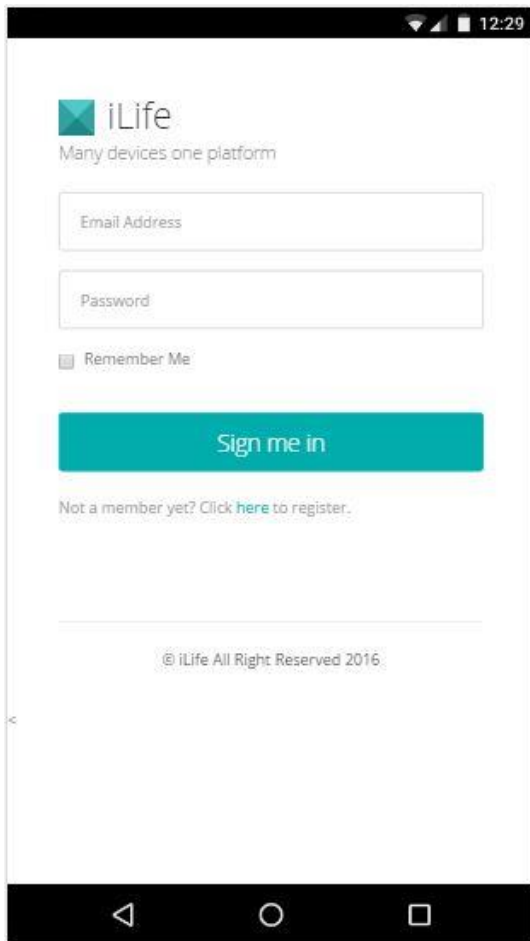
### User Interface in mobile app:



Dashboard



Dashboard 2



**iLife**  
Many devices one platform

Email Address

Password

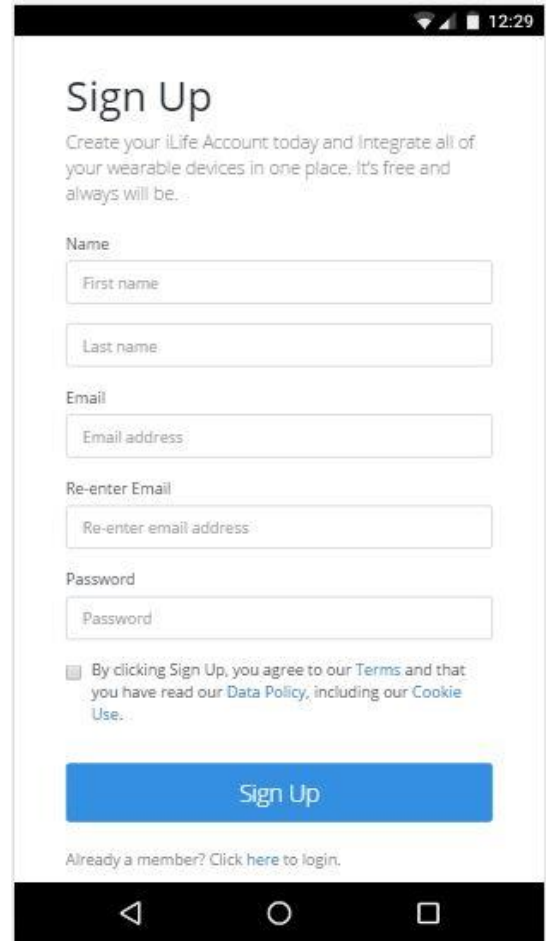
☐ Remember Me

**Sign me in**

Not a member yet? Click [here](#) to register.

@ iLife All Right Reserved 2016

Login



**Sign Up**  
Create your iLife Account today and integrate all of your wearable devices in one place. It's free and always will be.

Name

First name

Last name

Email

Email address

Re-enter Email

Re-enter email address

Password

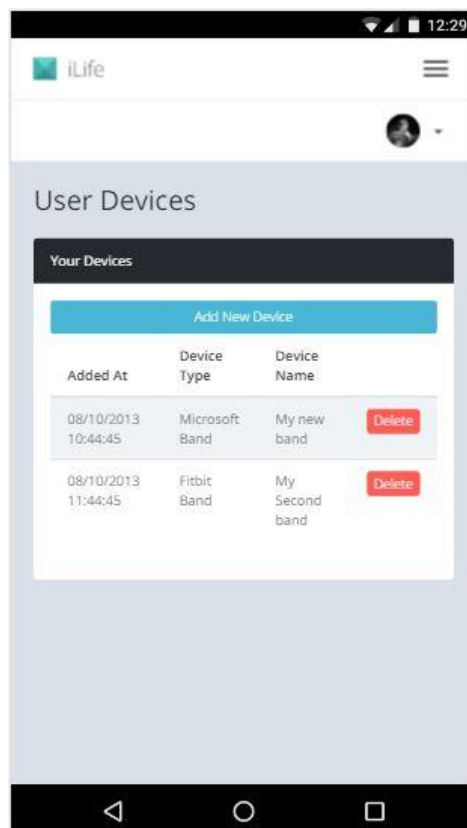
Password

☐ By clicking Sign Up, you agree to our [Terms](#) and that you have read our [Data Policy](#), including our [Cookie Use](#).

**Sign Up**

Already a member? Click [here](#) to login.

Register user



**iLife**

**User Devices**

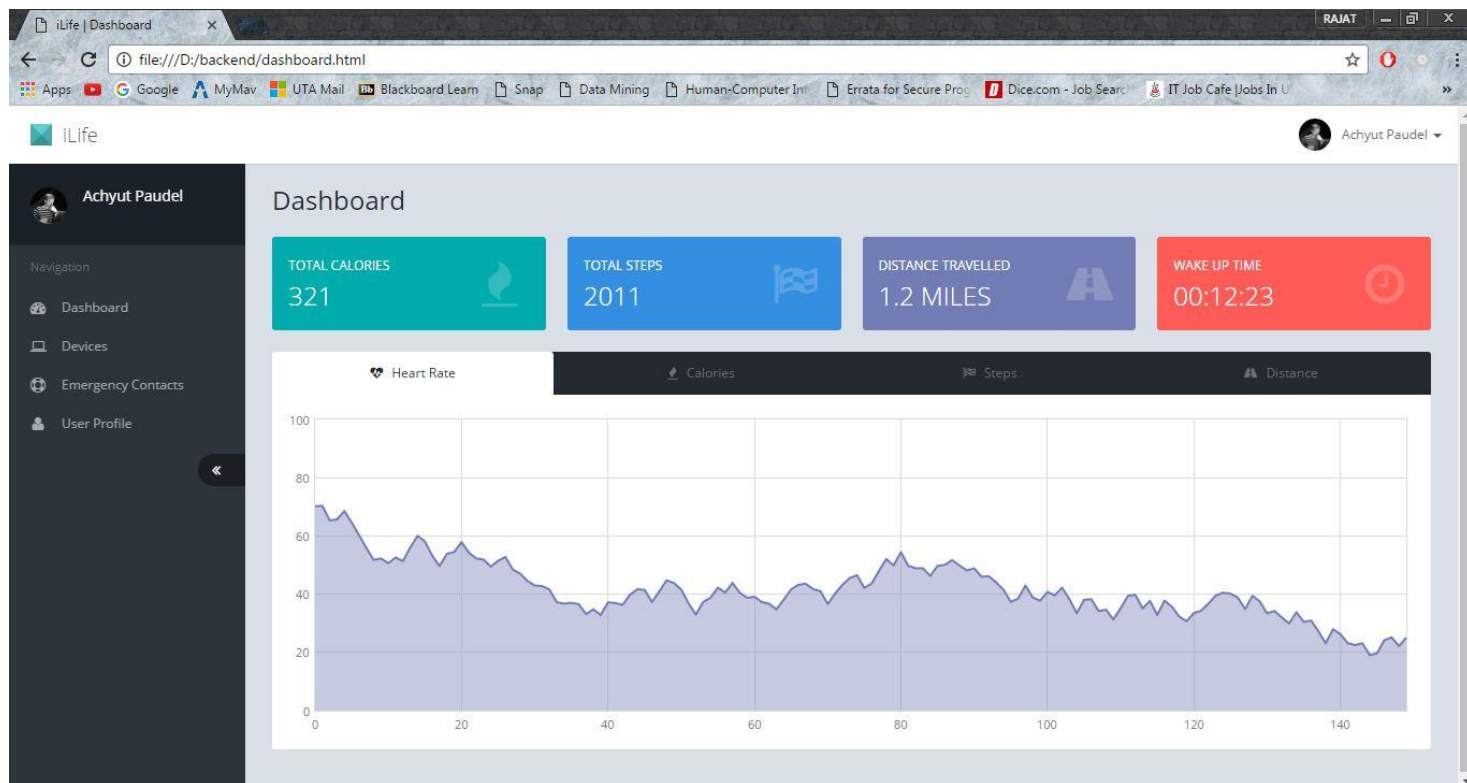
Your Devices

**Add New Device**

| Added At            | Device Type    | Device Name    |               |
|---------------------|----------------|----------------|---------------|
| 08/10/2013 10:44:45 | Microsoft Band | My new band    | <b>Delete</b> |
| 08/10/2013 11:44:45 | Fitbit Band    | My Second band | <b>Delete</b> |

Add Wearable Device

## User Interface for Website:



Dashboard

The screenshot displays the iLife User Profile page. The browser address bar shows the URL `file:///D:/backend/userprofile.html`. The page features a dark sidebar with the user's name "Achyut Paudel" and a navigation menu with options: Dashboard, Devices, Emergency Contacts, and User Profile. The main content area is titled "User Profile" and contains a form titled "Your Profile". The form includes input fields for "Your Name", "Age", "Height", and "Weight", each with a "Default input" placeholder. There are also radio buttons for "Gender" with options "Male" and "Female". A green "Update Profile" button is located at the bottom of the form. At the top right of the profile page, the user's name "Achyut Paudel" is displayed next to a profile icon.

Profile Page



iLife | Emergency Contact

RAJAT

file:///D:/backend/emergency.html

AppsGoogleMyMailUTAMailBlackboard LearnSnapData MiningHuman-Computer IntErrata for Secure ProDices.com - Job SearchIT Job CafeJobs In U

iLife

Achyut Paudel

Achyut Paudel

Navigation

Dashboard

Devices

Emergency Contacts

User Profile

Emergency Contacts

Your Contacts

Add New Emergency

| Contact Name | Phone Number | Address        | Relation |                       |
|--------------|--------------|----------------|----------|-----------------------|
| Gokarna      | 9178323967   | 715 Border Pl. | Friend   | <div>DeleteEdit</div> |
| sauroav      | 812-832-3968 | 12 West St.    | Family   | <div>DeleteEdit</div> |

Edit Emergency Contacts