

Title: InPace

Vision:

To change the way people exercise by providing both familiar and new statistics in a clear, concise format during and after exercise.

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List of Requirements:

User Requirements			
ID	Requirement	Size	Priority
UR-01	As a user, I want a user profile, so that I can see all of my data and progress.	8	High
UR-02	As a user, I want to be able to track my heart rate so I can see my improvements.	3	Med
UR-03	As a user, I want to be able to have notifications throughout my run how my time is compared to my previous run, so I can learn to pace myself better during runs and push myself harder	8	High
UR-04	As a user, I want to be able to see a graph of a breakdown of my heart rate throughout my run, so that I can see how hard I pushed myself and how much harder I can push myself.	2	Med
UR-05	As a user, I want to be able to see my calories burned after my run, so that I can track my results.	1	Med
UR-06	As a user, I want to be able to see my two runs' graphed distance by time side by side, so that I can immediately see how I did during the entire run.	5	Med
UR-07	As a user, I want to be able to be able to challenge my fellow user friends to runs, so that I can have fun getting fit.	15	Optional (long term stretch goals)

Business Requirements			
ID	Requirement	Size	Priority
BR-01	As the development team, we want to be able to update the system in order to fix bugs in the product.	5	High
BR-02	As the development team, we want the product to be made from cheap material so that we can afford to manufacture it and sell it at a reasonable price.	1	High

Functional Requirements			
ID	Requirement	Size	Priority
NR-01	The system must be able to track GPS positions and current run times in order to report whether the user is ahead or behind their previous pacing times	2	High
NR-02	The system must be able to track and log heart rate to provide the user with data about how strenuous the run is.	2	Med
NR-03	The system must be able to connect to phones via Bluetooth to transmit data to a larger and easier-to-read device that can display it in a cleaner and more detailed manner.	2	High
NR-04	The system must be able to recognize/record routes you run frequently in order to compare them with future run times.	8	Med/Low
NR-05	The system must be chargeable and hold its battery for up to 5 days.	2	High
NR-06	The system must be water resistant (must be wearable in the shower)	5	Low

Non-Functional Requirements			
ID	Requirement	Size	Priority
NFR-01	The system must look aesthetically pleasing	3	Med
NFR-02	The system must be small enough and light enough to be worn on the wrist comfortably.	2	High
NFR-03	The system must be easy to use. (More specifically, 8/10 users must be able to use the device without errors after a 15 second tutorial)	5	High
NFR-04	There must be an accompanying app to be able to show the user profile.	8	High
NFR-05	There must have sufficient prototyping and user testing prior to app development in order to assure usability	5	High

Methodology:

Mashup of waterfall and agile. We're starting by getting all necessary hardware working and together before we move into the software development stage. Once we're working on software, our methodology will shift to Agile.

Project Tracking Software: Trello

Link: <https://trello.com/b/J25X5SX1/cs-3308-group>

Project Plan: See next page

Project Plan:

CS-3308 Group ☆ Private

Github Repo & Google Doc


- GitHub Repo Link
- Google Doc Link
- Add a card...

To do list

1. Buy Parts
2. Test Part Functionality
3. Design App
4. Get Arduino Data into Phone
5. Prototype and Test App Design
6. Develop App
7. Develop Ardwinio Device Functionality
8. User Test Device
9. Iteratively Develop Test Results
- 10.
- etc...

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Necessary Features



List of features

- GPS sensor
- Arduino w/Bluetooth
- Way to display battery level
- Way to display time (ahead or behind) ex: +00:07.... or -00:25... etc.
- Can analyze data on computer after sending through bluetooth... eventually port analysis app to iOS & Android
- We might need an onboard micro SD card for data storage if user doesn't sync via bluetooth very often...


Add a card...

Favorite Components

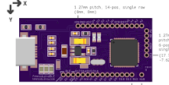
- Chips (Arduino, Bluetooth, GPS, some comination thereof)
- Screens
- LEDs
- Batteries and Charging
- Micro SD card

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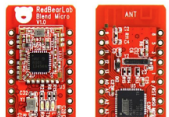
Combo Builds & Multipurpose Chips



Small Arduino GPS system, only thing missing is the bluetooth




Claimed to be smallest Bluetooth+Arduino Combo board




Add a card...

GPS System



GitHub repository specific G



GPS processor onboard C

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