



# InPace Documentation

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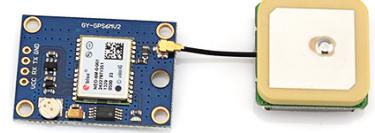
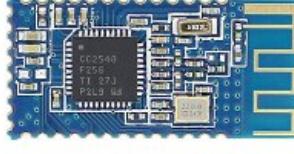
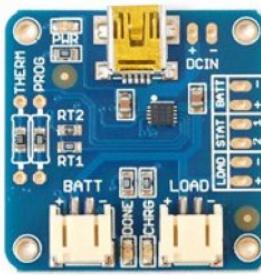
InPace is an Arduino based wristband that provides information on how the user is pacing themselves during a run, walk or cycling route. It tracks GPS locations and current times to compare the users current performance with previous attempts at the route. Other features could include more familiar statistics such as total time, heart rate, and calories burned as well as an accompanying app to display this information in a beautiful and clear manner.

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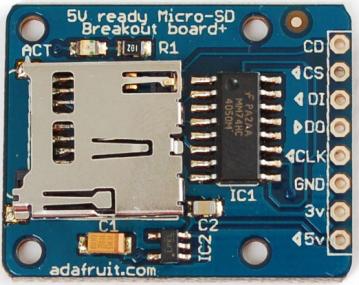
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# Parts List

Item	Description	Image
Arduino Pro Mini	<p>The Pro Mini is one of the more compact Arduino microcontrollers. Generic clones of this module can be purchased internationally for less than \$5. We are using the 5V/16mHz version but they are also made in a 3.3V/8mHz version.</p>	
GPS Module (GY-GPS6MV2)	<p>This module uses a NEO-M-0-001 and a powered ceramic antenna to receive and decode GPS satellite data.</p>	
Bluetooth Transceiver (HM-10)	<p>This Bluetooth transceiver features BLE 4.0, which means it can connect to the latest iOS devices as well as Android devices and computers.</p>	
Li-Po Charger (made by Adafruit)	<p><b>Input</b> Voltage: 5V Current: 2A max</p> <p><b>Output</b> Charging Voltage: 3.7V Charging Current: 100mA</p>	



110 mAh Li-Po Battery	A Lithium Polymer Battery with a charge capacity of 110 mAh	
RGB LED	Generic 4-pin common cathode RGB LED	
Push Button	Mini momentary tactile push button	
MicroSD Breakout	MicroSD Read/Write breakout board made by Adafruit. Unlike SparkFun's microSD breakout board, this one features onboard logic level conversion from 5V to 3.3V for receiving data from an Arduino, and 3.3V to 5V conversion to send it back to the Arduino. This saves from needing to use a separate 3.3V to 5V logic level converter board between the microSD breakout and an Arduino, as well as allowing our physical wristband to be smaller.	



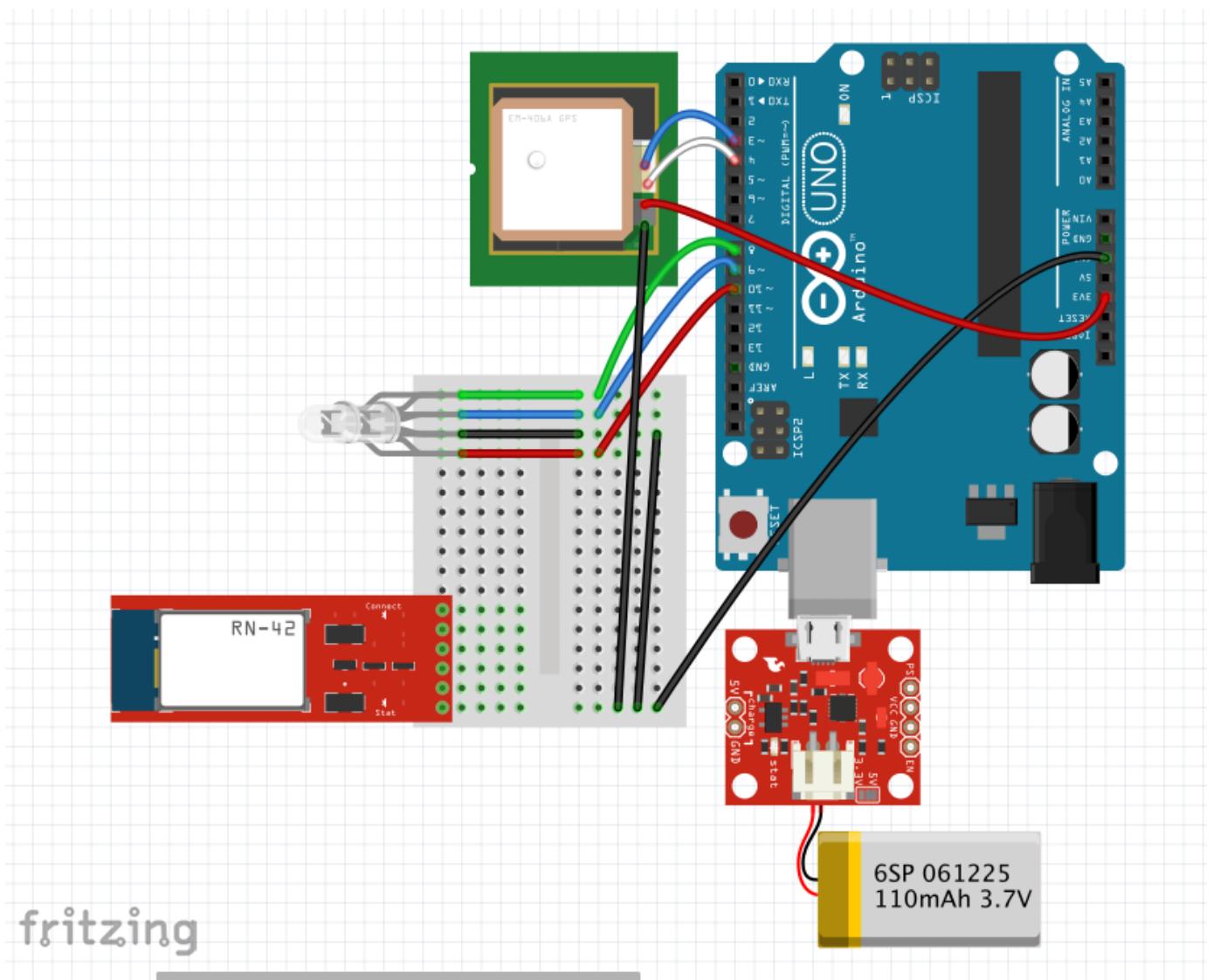
8 GB micro SD  
Card

This microSD card will be used to save GPS data. It is important to format the card to FAT16 or FAT32 before attempting to use it with the microSD breakout board.



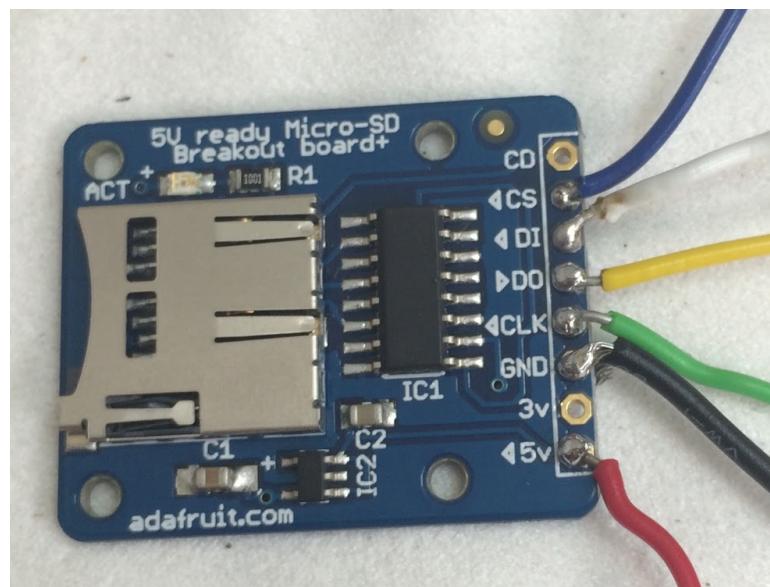
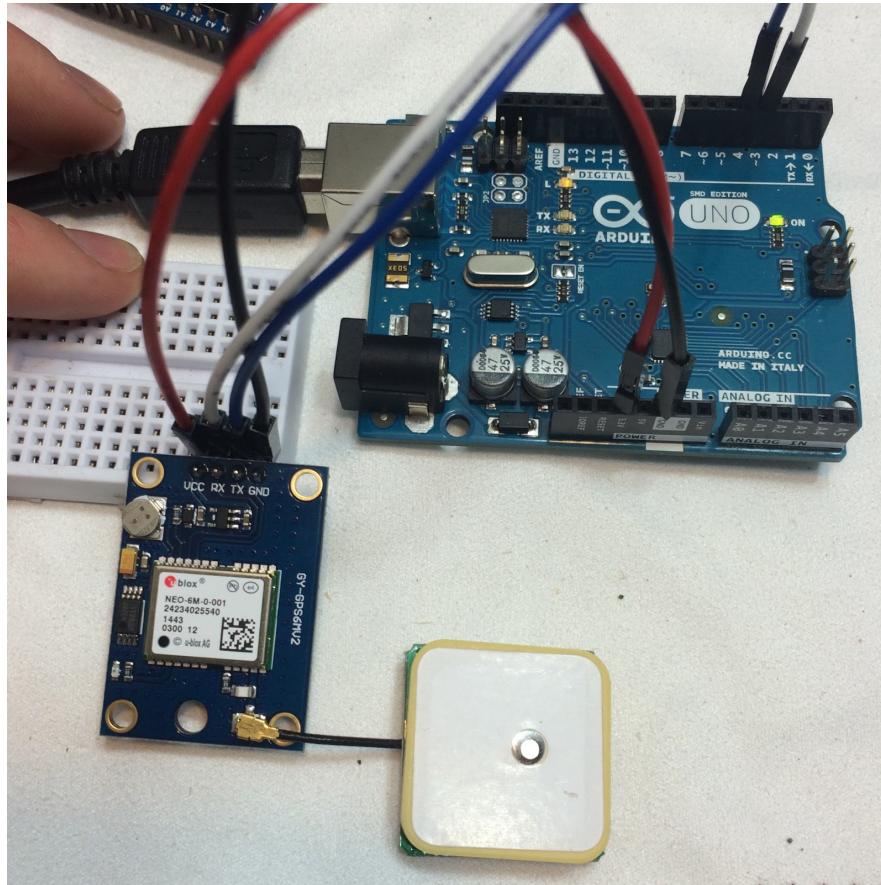


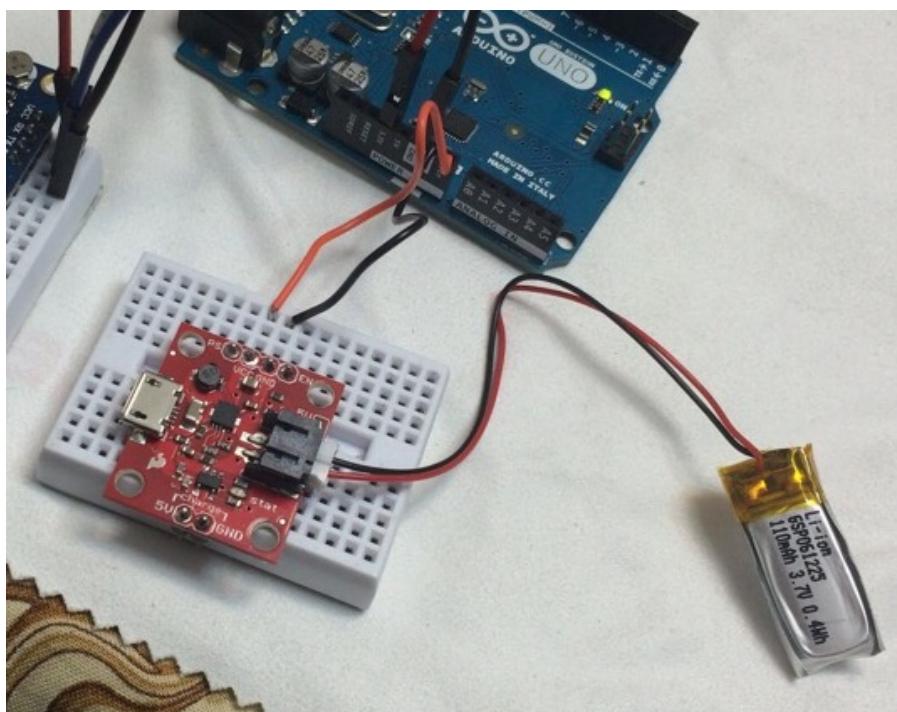
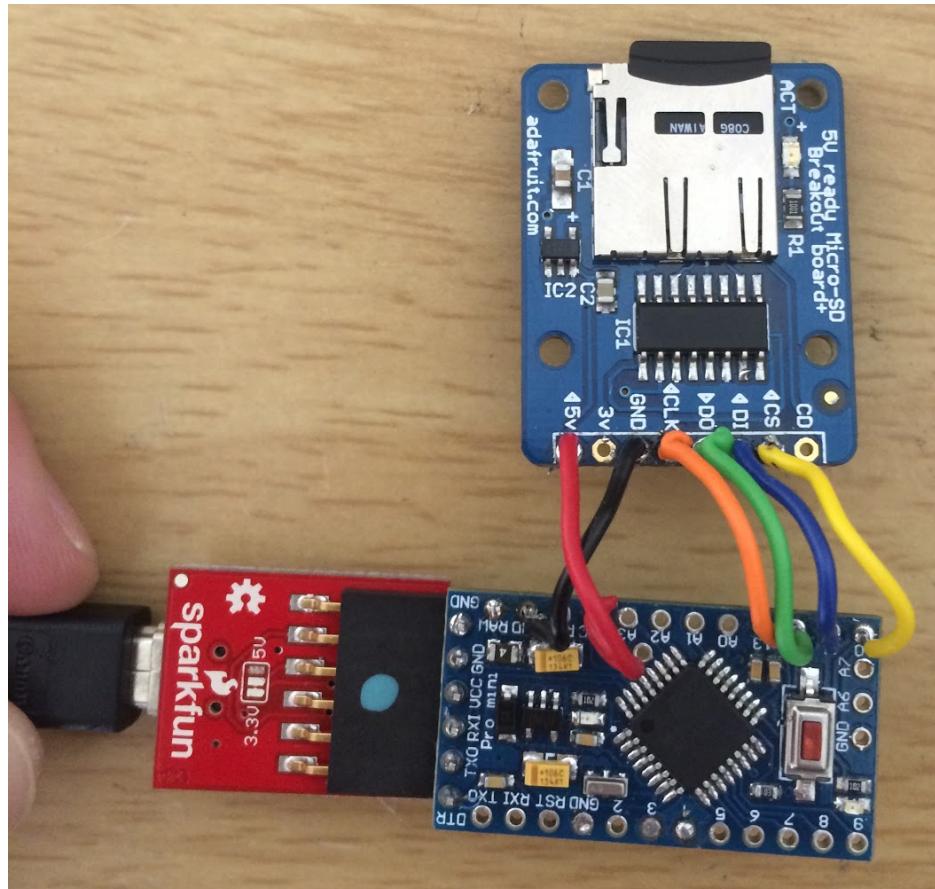
# Circuit Diagram (made in Fritzing)

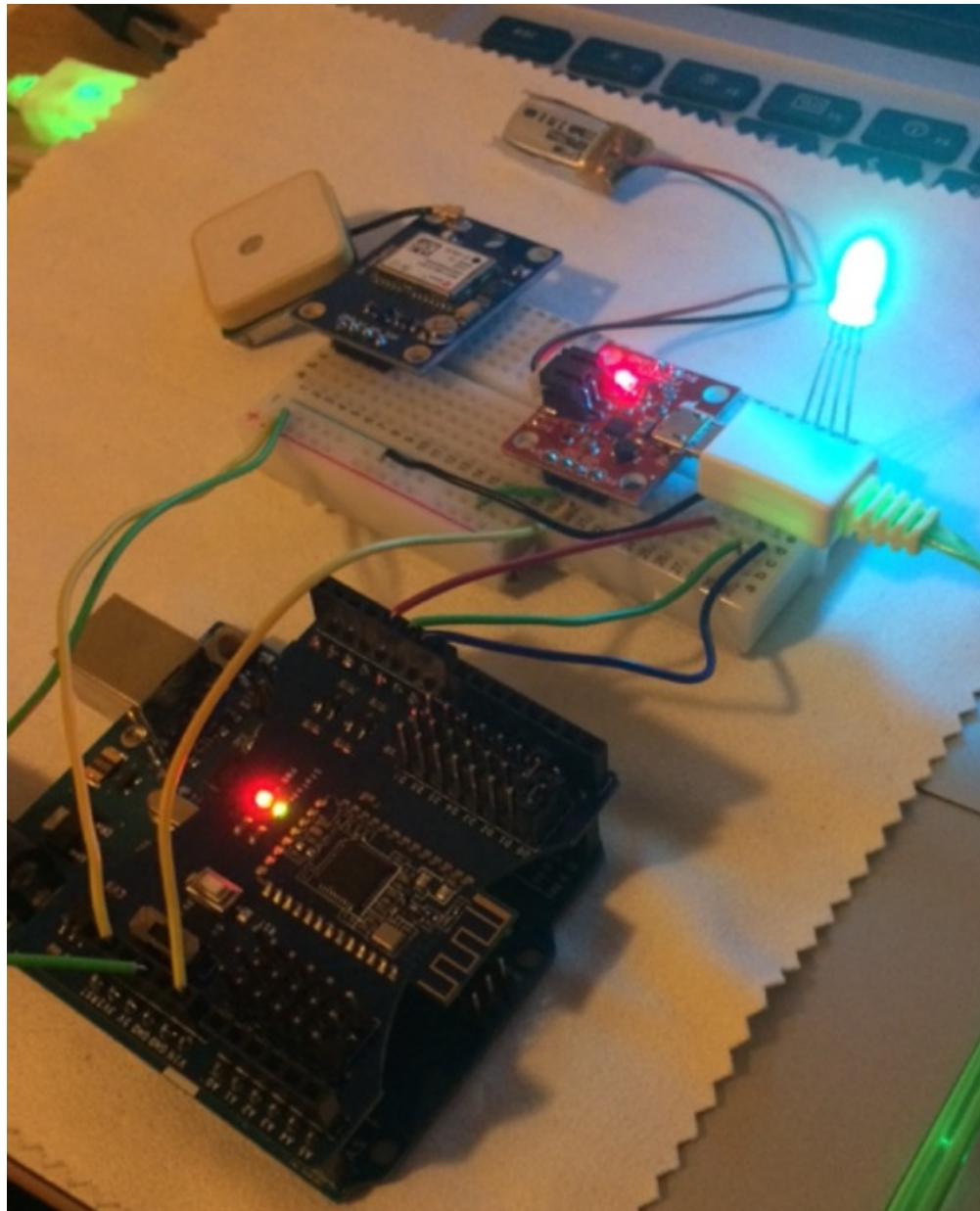




# Parts Testing

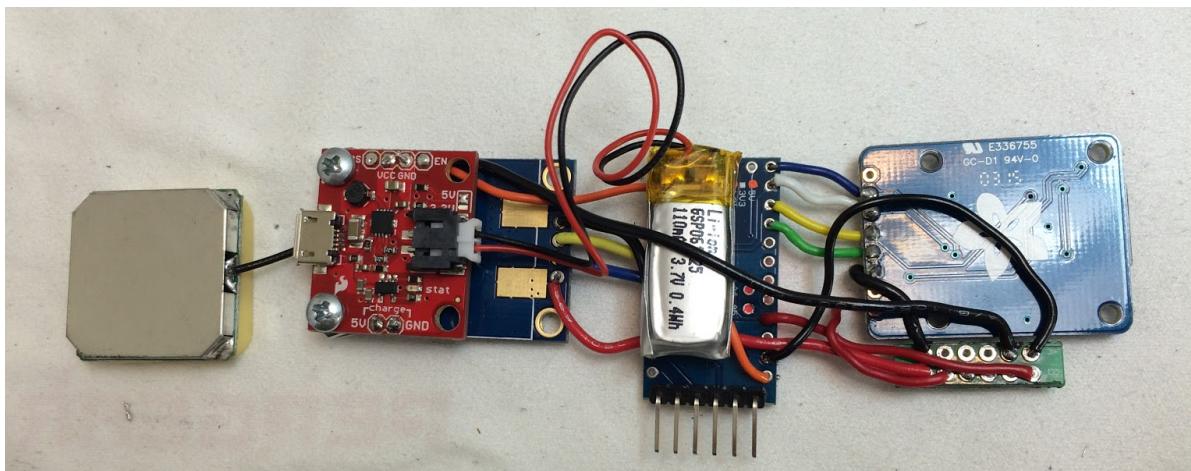
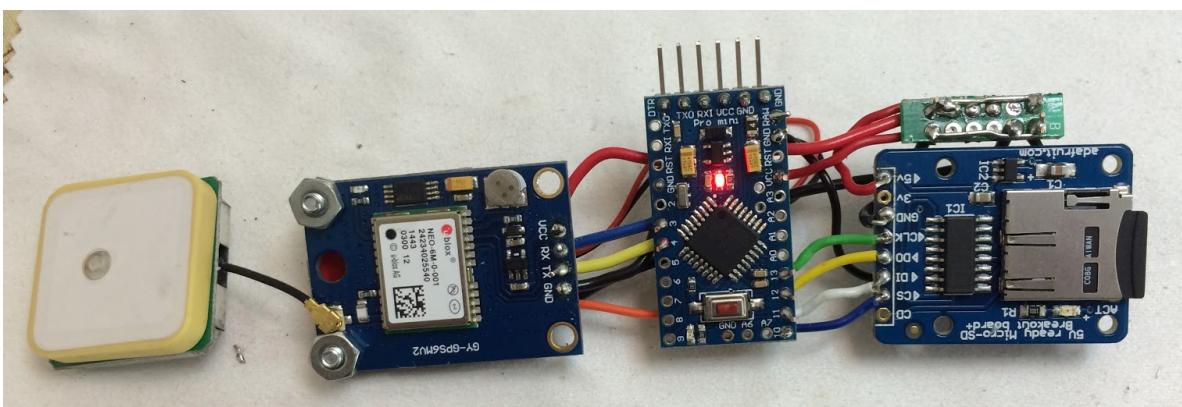
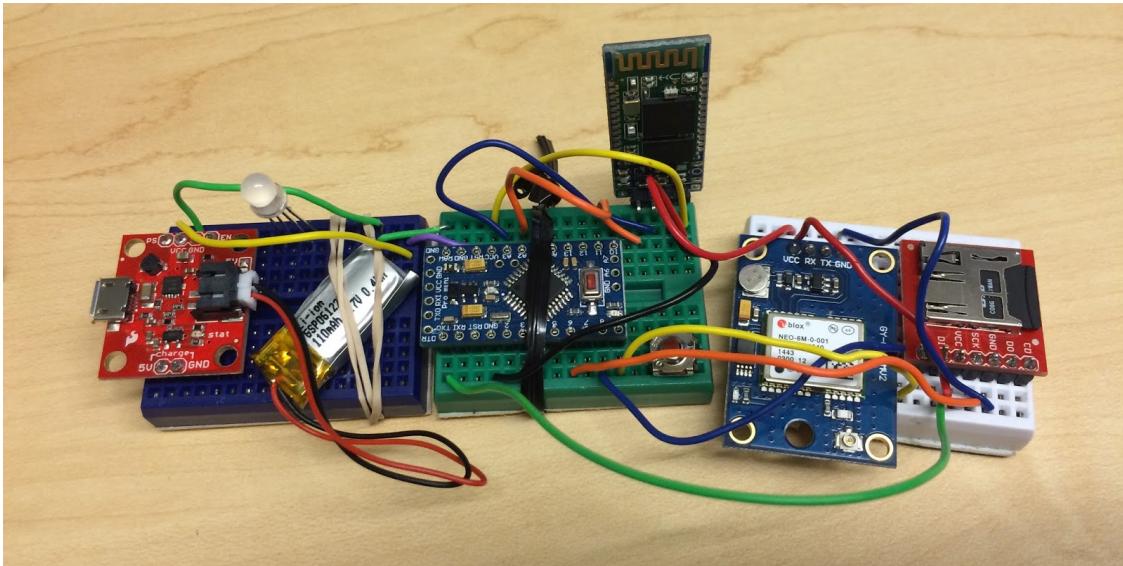








# Prototypes





# Mobile App Design

