

# How high am I?

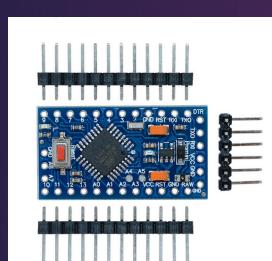
Rory Fleming | CRT 420 | Spring 2018

(feet)

## Problem Statement:

Adventurers and rock-climbers often wonder how high they are while exploring, yet do not have a reliable way to easily obtain this information from their current location.

## Main Components:



Arduino Pro Mini



BMP 180 Barometer

OLED Screen



## Solution:

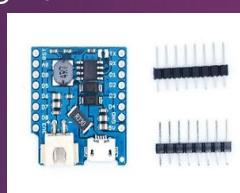


A hand-held device that would be able to calculate relative height (ex: if you are on a bridge over water) using standard physics equations based on the time it takes a rock to fall that distance.

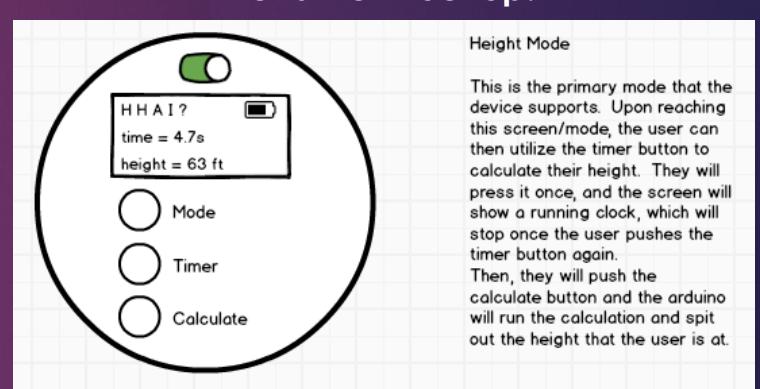


500mAh Rechargeable Battery

TP5410 – LiPo Charger/Boost Converter

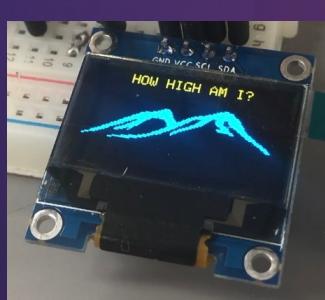


## Wireframe Mockup:

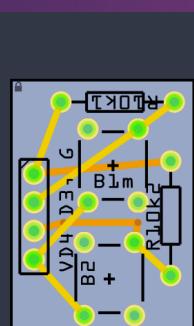


## Design Considerations:

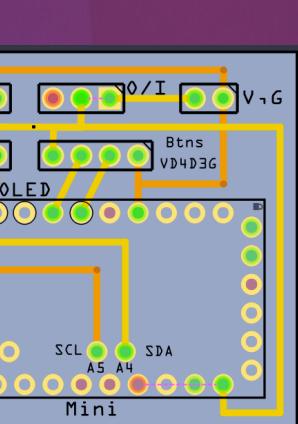
I wanted this product to be small and portable with quick access, durable, and intuitive to use with fast and accurate calculations.



Splash Screen



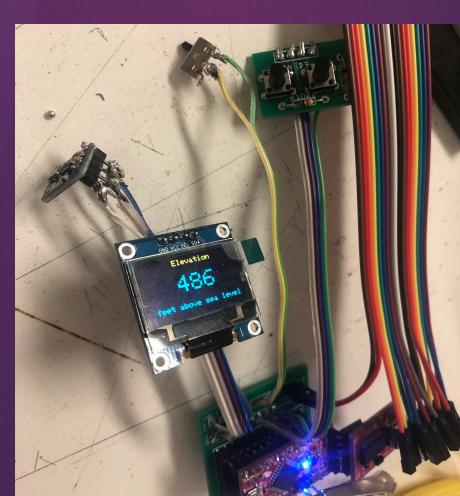
Finalized PCB Design



Breadboard with Components:



3D Model



PCB Soldered Together



Final Case