

Tasks	Start Date	End Date	Members	Status	Notes
Research & buying the needed equipment(Raspberry Pi, camera, pulse oximeter)	11/15	11/29	Team	Completed	
Setup team website.	1/18	1/25	Jarrett	Completed	
Background investigation in how pulse oximeters work and how to correct the problem of darker skin pigmentation impacting the readings.	1/18	1/25	Team	Completed	
Build and set up Raspberry Pi	1/25	2/7	Jarrett & Cole	Completed	Set back by snow, everything pushed back
Set up Pi Camera and connect to Raspberry Pi	2/7	2/10	Calvin	Completed	
Research ways to have a flash for the camera	2/22	3/1	Calvin	Completed	As close as camera is to finger, need some type of light source
Try mobile programming solution to bluetooth problem	3/1	3/4	Jarrett & Cole	Abandoned	Dr. Nelson recommended and gave some guidance to this approach, but we ultimately decided to buy a new pulse ox with python documentation
Research & purchase new pulse oximeter	3/1	3/4	Robert	Completed	New pulse ox also already has existing GitHub python code/libraries to retrieve data from pulse ox
Assist BMEG team with converting RGB code to Python	2/22	3/13	Gabriel	Completed	Decided it would be easier if this code was python. Traded to Robert & Gabriel
Research LED display for Raspberry Pi to display final result	3/4	3/13	Jarrett & Cole	Completed	BMEG mentioned maybe a Pi LED module to display final value be nice touch if time allows
Determine how to retrieve pulse ox data into raspberry pi through bluetooth	2/10	3/17	Robert & Gabriel	Completed	Reached out to Dr. Nelson for help, also entire group and BMEG team brainstormed backup plans if unsuccessful. Now waiting for new pulse ox.
Write script to check for device and retrieve data	2/22	3/17	Robert	Completed	Connect to bluetooth, retrieve data from UUID using handle, reformat data to be readable, and prepare data for rest of process
Research Pi button to initiate camera/whole process	3/11	3/17	Jarrett & Cole	Completed	Would be more fluid if one button on the Pi initiated the camera, pulse ox data retrieval, RGB analysis, etc.
Create SolidWorks design with BMEG Team	4/7	4/14	Calvin	Completed	Creating modified design for use with ring light
Assemble ring light	3/31	4/7	Calvin	Completed	
Combine data collection script and RGB code into one program	4/7	4/14	Jarrett & Cole	Completed	
Add image cropping code to image analysis script	4/14	4/21	Robert & Gabriel	Completed	
Add LED screen to output results	4/14	4/25	Cole	Completed	
Assemble prototype	4/7	4/14	Team	Completed	
Create tests cases for prototype	4/14	4/21	Team	Completed	
Test first prototype with different test cases	4/14	4/21	Team	Completed	
Improve design & fix errors	4/21	4/26	Team	Completed	Once errors are identified, members will be split up to address them
Document final results	4/21	4/26	Team	Completed	Work on final report/presentation