Meeting Minutes

**Date:** Tuesday, June 4, 2019

**In Attendance:** Brittany Hewitson, Corey Myrdal, Huy Thong Bui, Wenpei Li, Winsey Chui

**Start Time:** 11:02AM

**Purpose of Meeting:** talk about requirements specification document and project specifications

**Project Idea:**

* Use near-infrared or ambient light?
  + Near-infrared
  + Do not specify whether or not blocking out ambient light
  + Just say we will have a light source
* How would we get region of interest in the dark?
  + Facial detection using near-infrared light
* How to improve hardware to get better data?
  + Use near-infrared and ambient light?
  + Grating?
* How much data?
  + Use raspberry pi camera, select region of interest there, send that to cloud
* When do we run code? Continuous or in segments?
* Algorithm
  + Read in, filter, display
  + Select region of interest
    - Select multiple and compare across regions?
  + How to show data
    - Database in cloud
      * try aws – free for 12 months, certificate for students, 750 hours
      * ms azure – free for 12 months
      * firebase – free plan, 2000 writes/day, 50,000 reads, 20,000 deletes
  + calculate HR and RR from raspberry pi
  + sending notifications draws from cloud
  + cloud only stores arrays of averages
  + read in image, find average value, throw away video, keep 10 minutes of intensities (HR and RR average values) to see how it changes over time

**Requirements:**

* Do not specify, just say light source
* Will need database
* Requirements for database
* General requirements
  + System will have camera, a microcontroller, database
* Performance requirements?
  + Code takes less than 10 minutes?
  + Not a long time between getting data and processing data
* Electrical/Hardware requirements
  + Power source
  + Camera – use raspberry pi camera
  + Illumination source in near-infrared
* Connection requirements
  + Needs to connect to cloud
  + Needs to connect to hardware
* Software requirements
  + Automated selection of region of interest

**Plan for Requirement Specs:**

* Get individual parts done Friday
* Requirements done Thursday
* All just find requirements, add to each phase and come together to discuss at next meeting

**Action Plan for Future:**

**Next Meeting Date:** After workshop on Thursday June 6, 2019

**End Time:** 12:13PM