

Sprint Evaluation**Overview**

In this sprint, we have studied on literature and decided what we can do or not. We've read some papers to get an idea about the potential using of thermal camera to measure vital signs and we also did research for practical implementation of these papers. We noticed that some papers are not applicable to our project. So we neglect them and we found new methodologies. Finally, in regard to our researches, we have chosen the ones we will try to implement in our project.

Tasks

For the first sprint, our goal was completing the first two tasks that we stated in our start up document. These tasks are completing the installation of the thermal camera and learning it's software and capturing a data set using thermal camera to work on. We have completed this two tasks successfully but we faced with some problems. Our biggest problem was using the thermal camera since some technical problems occurred while we trying to use it. There was a problem in it's power supply and we cannot understand it until we met with the owner of the camera. Therefore, it took 2 weeks to install it's software in a correct way and use it to capture a data set. Although we had troubles related to thermal camera at first two weeks, we did not prefer to change our system components-thermal camera actually- and tried to find origin of trouble. Hence we did not update our plans. Finally, we have collected the data set from thermal camera and started to process them to warm up in the end of the second week. Since we have completed our first sprint deliveries before the first sprint ends, we started to work on our third task. We spent the last week of the first spring to apply image enhancement techniques to our data set as pre-processing steps to ease the next operations. Now we are still working on the image enhancement techniques to decide which ones we will use.

Team evaluation

We got along with each other and have not faced with any problems about team working so far. We held meetings with our project assistant and supervisor every week and apart from this we meets as a group at least three times in a week. Also we were in touch all the time. We started to use forums in OpenProject to discuss about the project. We are all happy with our group and the working scheme. For the first sprint, we preferred to work on the tasks together in order to hold a view about the thermal camera and the images that we will work on but we are planning to share the next tasks to speed up the development of the project.

Task	Assigned Member	1 st week	2 nd week	3 rd week
Thermal camera	All members	x	x	
Capturing Dataset	All members			x
Enhancement of Captured Images	All members			x

Backlog Updates

As user stories, we have the following user cases:

- **As a user, I should be able to see my baby's current fever.**
- **As a user, I should receive an alert if baby's fever is higher than usual.**
- As a user, I should be able to see my baby's heart rate.
- As a user, I should receive an alert if baby shows any kind of arrhythmia.
- **As a user, I should see my baby's current sleep cycle status (if s/he is safely sleeping or not).**
- **As a user, I should receive an alert if my baby wakes up.**
- As a user, I should be able to check my baby's respiration rate.
- As a user, I should receive an alert in any case of breathing disorder.
- As a user, I expect the product to provide features such as lightning and playing classical music if my baby is about to wake up.

Firstly, we are planning to complete temperature measurement and sleep cycle determination parts (the bold written user cases). These parts are expected to be completed and able to be shown as an end-product of our first semester work. Furthermore, if this part takes shorter time than we predicted, we are planning to initiate respiration measurement session. We expect the temperature measurement part to be completed until the next week meeting. Sleep cycle determination part is planned to be completed within one month. The rest of our user cases will be mapped out as soon as the second semester starts.