

# Project Updates: 03-05-2024

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## Introduction

- **Supervision Meetings:**

Consists of a listing in table format of the supervision meetings that have occurred since the last update, including dates, attendees, and a brief description of discussions and actionable items.

- **Actionable Items Recap:**

Consists of a listing in table format of the actionable items from the previous week, briefly discussing the progress made and pending tasks.

- **Additional Project Updates:**

Consists of updates that weren't 'actionable items' from the previous week, such as brief overviews of experiments conducted, data collected, and research findings.

- **Next Week's Agenda:**

Consists of a listing in table format of the actionable items to complete before the next weekly update, including task descriptions, rough timelines, and success metrics.

- **Comments & Concerns:**

Consists of a brief analysis of comments or observations about other aspects of the project, such as facilities, work environment, and any outside interest in the project. Furthermore, outlines any concerns about the project.

# 1 03-05-2024

## 1.1 Supervision Meetings

### 1.1.1 30-04-2024

Attendees: Sidharth Shanmugam, Paul Mitchell, Ben Henson

Agenda:

- Discussed final report structuring.
  - I proposed my high-level report structure plan, with section names and overall information as to what content goes in each section.
  - Received invaluable feedback and now have a better idea of how I will be writing the final report.
- Final viva presentation.
  - Ben suggested I prepare the demonstration presentation before writing the final report. Paul and Ben also suggested I host a seminar regarding my project, presenting to the ISA researchers :).
  - By preparing the presentation before writing the final report, I will have a better idea of report structuring. And by presenting a seminar, I will gain experience for the viva.

Actionable Items:

- Prepare presentation.
  - I will be preparing an initial draft of a presentation that I could use for my viva, and could also use for a seminar. Although I am quite nervous about presenting my project, as an inexperienced MEng student, to a panel of extremely experienced researchers, Ben and Paul have reassured me that it would not be as bad as I'm portraying it to be.
  - I'll be discussing this for the next supervision meeting, hopefully with an initial draft at hand.
- Carry on writing the final report.
  - One of the postdocs at the ISA suggested I give myself a day or two's break after writing the final report so that I can clear my mind, such that when I read it again, I will be able to find faults more easily.
  - I will aim to finish writing the report some time in advance to allow as much time as possible for Ben to review my section drafts and for me to take a break before reading it again.

## 1.2 Actionable Items Recap

### 1.2.1 Parallax and offset calibration

Progress Report:

- No progress was made for this actionable item due to the lack of time within this project.
- As I mentioned in last week's update, this actionable item consists of extremely complicated aspects that would ideally require many weeks to research, develop, and implement, not just for software, but also for the hardware construction of the submersible to mitigate as much offset as possible.
- I will be skipping this task, however, it is something I will be writing about in my final report as future work.

Pending Tasks:

- *None.*

### 1.2.2 Snake-based segmentation & tracking

Progress Report:

- No progress was made for this actionable item due to the lack of time within this project.
- I did consider whether it is really necessary to implement a snake-based segmentation logic since my standard Canny + minimum enclosing circle method works extremely effectively due to minimal computational intensity and simplicity. However, a minimum enclosing circle will result in some of the non-backscatter regions being unlit due to the circle estimation, which can be resolved by accurately wrapping the projected 'holes' perfectly around the backscatter outline.
- Sadly, due to the severe lack of time, and efforts being shifted to the final report, I will not be implementing this or the tracking feature, entirely skipping software Milestone V2. Although, I will surely write about this in my final report as future work.

Pending Tasks:

- *None.*

### 1.2.3 Complete the 'Introduction' section of my report

Progress Report:

- Although not yet pushed to the GitHub repository, I have completed this section.
- I have also completed around two-thirds of the next section 'Background Information'

Pending Tasks:

- I will aim to complete the 'Background Information' section completely to produce the first drafts of this and the 'Introduction' sections for review by Ben.

## 1.3 Additional Project Updates

### 1.3.1 Demo went quite well.

- My project attracted a surprising amount of attention from a lot of visitors, who were mostly staff, for example, Phil Lightfoot, who is an avid diver, was extremely impressed with the project.
- Unfortunately, we didn't have many external visitors, albeit from the three who visited my room and saw the project, one asked me to pose next to the project demonstration and poster and took a picture of me, which I found was quite funny as I'm not sure where that picture of me has ended up. Despite including big QR codes in my project poster linking to my project initial report, personal CV, and LinkedIn, I don't think anyone was interested enough to scan them :(.
- A piece of feedback that I'd like to give to the department is: invite more external people from industry to these demonstration days! Browsing around at other projects by my peers, I found many to be exceptional despite not being given any interest by the visitors. It all feels like a wasted effort when there isn't anyone to demo your project to. Also, by inviting more people, there would be more recognition of the university, which is great for business!

## **1.4 Next Week's Agenda**

### **1.4.1 Tuesday - Prepare presentation draft.**

Actionable Items:

- A simple draft of the presentation structure for the viva and maybe even a seminar if it's good enough.

Success Metrics:

- Draft at hand in time for the supervision meeting on Tues.

### **1.4.2 Tuesday - Finish the 'Introduction' and 'Background' sections of the final report.**

Actionable Items:

- I need to finish these sections in time for Ben to review them.

Success Metrics:

- Draft at hand in time for the supervision meeting on Tues.

## 1.5 Comments & Concerns

No comments or concerns at the moment.