

EE/CprE/SE 491 - WEEKLY REPORT 5

October 11th - October 17th

Group number: may25-32

Project title: MicroCART mini: Microprocessor Controlled Aerial Robotics Team

Client &/Advisor: Dr. Phillip Jones

Team Members/Role:

- Daniel Zaucha: Client interaction, Communications Lead
- Jonah Upah: Team Secretary, Meeting Organizer
- Ryan Lowe: Software Lead
- Yi Hang Ang: Hardware Design Lead

○ **Weekly Summary**

We have continued going through the [MicroCART bootcamp document](#) and as a group have nearly finished going through CPRE 488 Lab MP4. We have individually watched the lecture notes associated with what the class would be learning at the time of the lab. We are also continuing individual flight practice.

○ **Past week accomplishments**

- Daniel Zaucha
 - Went to Lab on Friday, Saturday, Tuesday, Advisory Meeting
 - Guided meeting
 - Continued flight training practice
 - Watched Lectures on MP4 materials
- Jonah Upah
 - Weekly meeting notes with Dr. Jones.
 - Cheap drone practice
 - Made progress on MP-4.
 - Understanding the GUI.

- Using the test bench.
 - Learning the code base on the VM
 - Code beyond 488.
 - Learning some basic workflow on VM
- Ryan Lowe
 - Completed ~1 hour of flight training with cheap drones
 - Watched the 3 lecture videos (Week 11, 12,13)
 - Better understanding of how PID works/interacts with the drone
 - Began work on MP-4
 - Had some issues with flashing the drone and getting the GUI setup
- Yi Hang Ang
 - Went to Lab on Tuesday to discuss what we've accomplished
 - Helped complete class assignments (Design Document etc.)
- Pending Issues/tasks
 - MicroCART Mini Bootcamp - Weeks 4-5 - Project introduction document started by previous years' groups
 - Complete Lab 4 for a better understanding of fine-tuning PID Controls
- Individual contributions

<u>NAME</u>	<u>Individual Contributions</u>	<u>Hours this week</u>	<u>HOURS cumulative</u>
Daniel Zaucha	<ul style="list-style-type: none"> ● Flight Practice, Lab 4 research 	6.5	23
Jonah Upah	<ul style="list-style-type: none"> ● Took Dr.Jones meeting notes 		15
Ryan Lowe	<ul style="list-style-type: none"> ● Flight training, MP-4, lecture videos on PID tuning 	5	19
Yi Hang Ang	<ul style="list-style-type: none"> ● Went to weekly meeting with Dr. Jones and SD Team. ● Took Meeting notes ● Completed class assignments 	2.5	20.5

	<ul style="list-style-type: none"> Went to Lab on Tuesday 		
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○ **Comments and extended discussion**

- Midterm Week(s) has hit all of the group members

○ **Plans for the upcoming week**

Group Plan

- Document and organize where the videos for architecture are located and which types of architecture they are
- Start working on the group website, email Dr. Jones when completed
- Work through the established project document: MicroCART Bootcamp
 - 2-3 weeks remaining at most
- Continue practicing flight with cheaper drones.
- Finish/Make more progress in Lab 4.
- PID research.
- Start to look into The non 488 GUI and flight controller.

○ **Summary of weekly advisor meeting**

For next week, we should have watched more of the architecture videos, and should be able to decipher where different parts of the architecture are located; think big picture vs focused and where they are located. We have also been told to start a new document that organizes where different pieces of information are located (i.e. git repo, youtube lectures, past project videos, etc), and that this will be the start of both our git repo and our folder in MicroCART.