EE/CprE/SE 491 WEEKLY REPORT 03
Sept 27th, 2024 – Oct 3rd 2024
Group number: 25-34
Project title: Laser Scan Readings for Propeller Measurement
Client &/Advisor: Linden Propeller (Gary Linden) / Dr. Mani Mina

Team Members/Role

Name:	**Role:**
Alan Whitehead	Testing
Elias Colsch	Client interaction
Spencer Rudin	Schematic Design
Denny Dang	Individual Component Design

Past Week Accomplishments

Name	**Past Contributions**
Alan Whitehead	Emailed Mani and James Hiese for previous research and went to ETG to order the custom wiring.
Elias Colsch	Discussed industrial sensors with ETG. Researched alternative 3D scanners and IR sensors. Started work on proof of concept
Spencer Rudin	Went to ME dept to see if they have any comparable IR technologies. Worked on concepts to potentially fix vertical issue.
Denny Dang	Received an IR sensor and Arduino from ETG to set up a proof of concept for the overall design.

Weekly Summary:

We met with Mani Mina this week to discuss our progress and plans. We also began coding our proof of concept using the Arduino and sensor we got from ETG. We set up the board, but there is an error that we will be working to fix in the upcoming week with a new Arduino board. Got an

unofficial quote from KEYENCE on one of their sensors and received an access requisition card to use the MODELMAKER system.

Name	Individual Contributions	Hours this week	HOURS Cumulative
Alan Whitehead	I started researching data fusion as a potential solution to getting over the cost hurdle. I've also been contacting James Hiese about his past research on this project to see what we can use. I've started going through my old 288 code to see what can be used for the proof of concept.	4	10
Elias Colsch	I kept researching different alternatives for lasers and IR sensors. Also received the IR sensor from ETG with the necessary adapter. Also helped with setting up a proof of concept.	5	12
Spencer Rudin	I researched lasers and how they interact with the devices being measured. Looked into alternative solutions to our current understanding of our overall design.	4	9
Denny Dang	I started research on alternative applications of distance measuring devices. Researched and looked into a laser from Keyence, coincidentally being our cheapest option for laser devices. I talked to an engineering representative from Keyence about our project and constraints. I started working on the programming and systems of our proof of concept using the IR sensor from the CPRE 288 Lab and an Arduino to communicate.	5	10

Plans for the upcoming week

Name	Future Contributions
Alan Whitehead	Continue working on the proof of concept and researching alternative concepts.
Elias Colsch	Continue working on proof of concept and updating Mani Mina and Gary Linden with weekly reports.
Spencer Rudin	Work on a solid schematic for our proof of concept(considering a working laser given the needs and constraints of the project, not considering the need for protection in the work environment at this point).
Denny Dang	I will get back in touch with the Keyence engineering representative for further collaboration. I will continue researching potential solutions for our design. I will continue working on feedback and testing with our proof of concept.