EE/CprE/SE 492 STATUS REPORT 1 End of 491 - 01/30/2025 Group number: sdmay25-15 Project title: Millimeter-wave 3D Scanner Client &/Advisor: Mohammad Tayeb Al Qaseer Team Members/Role: Nathan Reff Luke Post James Peterson Daniel Ripley-Betts

Week's Overview

For the first week, we met with Dr. Tayeb and got a start for this semester. We double checked the scanner to make sure everything was assembled correctly before moving on. We looked at more of the end stop parts and came to the conclusion that we need to print another piece for the endstop to make it thicker to allow for less error when scanning. Most importantly Dr. Tayeb wants us to make a new Gantt chart for the software side of the project to make sure everything is done by the end of the semester. Lastly we started with downloading the software and testing but it didn't fully work yet.

• Key Accomplishments:

- Nate: I did research on the firmware that is uploaded, looked over the assembly manual more to prepare for the next semester.
- Luke: I prepared to do work from remote as I will be in Virginia for the upcoming semester.
- Daniel: I can't recall if I mentioned this in our last report at the end of the semester but I modified a component of the Voron 3D printer so that it extends out and will trigger the Z-end stop. Also 3D printed it
- James: I spent some time researching html and css for a user interface implementation.



 Collectively: stop trigger) (cable bridge with added end

We met to review the state of the project and meet with our client.
We have started work on a new gant chart and finalization of the motion system.

• Challenges/Issues:

- Nate: None
- Luke: None
- Daniel: Trying to get printrun by pronterface to work is not as simple as I wanted it to be. The usb com port is not showing up on my laptop when connecting the Octopus motion board to it directly. Researching
- James: None

Individual Contributions

		Hours this	Hours
Name	Individual Contributions	week	cumulative
l Nate	Conducted research on upcoming parts of the project, assembly manual and firmware	6	53
Luke	Discussed with team logistics for doing project remotely	4	50
l Daniel	Modded and printed the z-endstop, arranged the meeting with Tayeb and group.	6	53
James	Research on html and css for UI.	6	53

Upcoming Week's Plan

- Nate: Finish assembling the scanner. Work on the endstops, do some more research on the firmware that was just uploaded and programming of the UI
- Luke: Start assisting with software and coding of the project.
- James: Continue to understand the workings of html aided with css to perform needed functionality for our user interface. Perhaps look into other languages to work with html to accomplish this.
- Daniel: Figure out why printrun wasn't working, reprint the z-endstop components hopefully for the last time.

Advisor Meeting Summary

- Key Discussions:
 - Create new Gantt chart for software design component of the project
 - Discussed the Software, we downloaded on computers and tried testing, Tayeb also made it clear that we could just directly connect our laptops to the octopus board and cut the pi out of the equation.
 - Make endstop thicker so doesn't flex for less error
- Action Items:
 - Make a plan for the semester to get everything done
 - Print new endstop for build
 - Do some more research on Printrun software for computer to printer