EE/CprE/SE 491 WEEKLY REPORT 5 10/11/2024 – 10/18/2024 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

This week was productive, but not without its challenges. Illness has taken its toll on our team making its rounds, which made adhering to the schedule in an inclusive manner harder this week. On that note, however, we did create a schedule/Gantt chart from now until the end of the semester. Additionally, we have made further progress soldering the SPI interfaces, and began the construction of the metal frame and motion system of the scanner.

• Key Accomplishments:

- James: Met with client and went to lab to see some soldering done as well as look at parts that came in Voron kit
- Luke: Hand-soldered some of the remaining components in place
- Nate: Worked with Daniel to start construction of scanner. Assembled frame and familiarized myself with the manual to prepare for future construction.
- Daniel: Worked with Nate to start construction of the frame, motion system, and gearing for the scanner. Observed some more soldering.
- Collectively: Read the printer build manual.

• Challenges/Issues:

- Nate: Been busy with exams this week so struggling to find time to work on voron construction
- Daniel: None
- Luke: Has been sick all week so couldn't get a lot done. The pins on one of the components are refusing to solder to the board
- James: None

Individual Contributions

| | | Hours this | Hours |
|--------|--|------------|------------|
| Name | Individual Contributions | week | cumulative |
| Nate | Worked on construction of voron scanner. Viewed soldering. | 7 | 18 |
| Luke | Did some more soldering and almost have all of the components done | 3 | 17 |
| Daniel | Help with the first phase of soldering, study boards of voron builds | 7 | 16 |
| James | Went to lab and looked at parts | 6 | 16 |

Upcoming Week's Plan

- Nate: Continue and finish construction on Voron Printer frame and work on construction of rest of Voron printer
- Luke: Finish the soldering and continue to get the Voron printer built. I want to start testing the circuit board as well.
- James: Work on building the Voron printer frame.
- Daniel: Continue working on the Voron frame, learn about SPI interfaces. Assist where needed

Advisor Meeting Summary

- Key Discussions:
 - Gantt Chart and schedule going forward
 - Tips for build and documentation
- Action Items:
 - Include a render of Voron 3D model
 - Continue build of printer