

Team Name: sddec21-09

Team Members: Ryan Lanciloti, Ben Pierre, Chinar Kaul, Alyssa Marshall, Jared Hermon, Abdelaziz Hassan

Report Period: April 13th- April 26th

### **Summary of Progress in this Period**

The ESP32 team switched from a RPi to an ESP32 as our relay device. We came to this decision after the raspberry pi was too unreliable for UART communication. The reflector team found research to prove that aluminum was one of the best reflecting metals. This should result in a high level of amplitude from this specific path that our CSI system should be able to measure. We should see observable differences in particular sub-carriers when that testing partakes. We also confirmed that the movement of the door will change the length of the path and will see an observable change in phase. The backend team developed a Tensorflow model for RSSI signals using sample data.

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### **Pending Issues**

The team has been quarantined this week and into next week due to COVID.

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### **Plans for Upcoming Reporting Period**

In the upcoming period, we plan on testing the Tensorflow model with real RSSI data. Additionally, we will work towards the final presentation, we intend to show up prepared and leave with a feeling of success. Additionally, we will work towards finalizing the bridge between all our components, we have a loose connection however it needs polish and format.

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