

CEG4913 Weekly Progress Report

Week #: 5

SCRUM/Sprint No. 13

Group Number: 3

Date: October 23rd, 2025

One line summary of progress:

Work Completed

Hardware:

- Completed and tested stereo camera driver
- Designed and integrated adjustable camera mount into main casing

Software:

- Screen UI tweaks
- Twilio development
- REST API integration with website

Team Member Contributions:

Aaditya Shah:

- Implemented and tested stereo camera driver

Abdullah Ramadan:

- Designed and integrated adjustable camera mount into main body

Keith Tran:

- Working on Twilio API integration

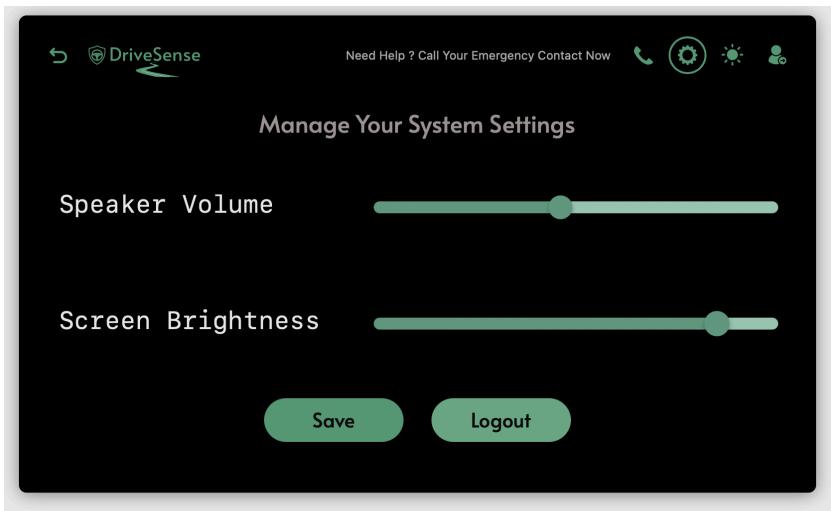
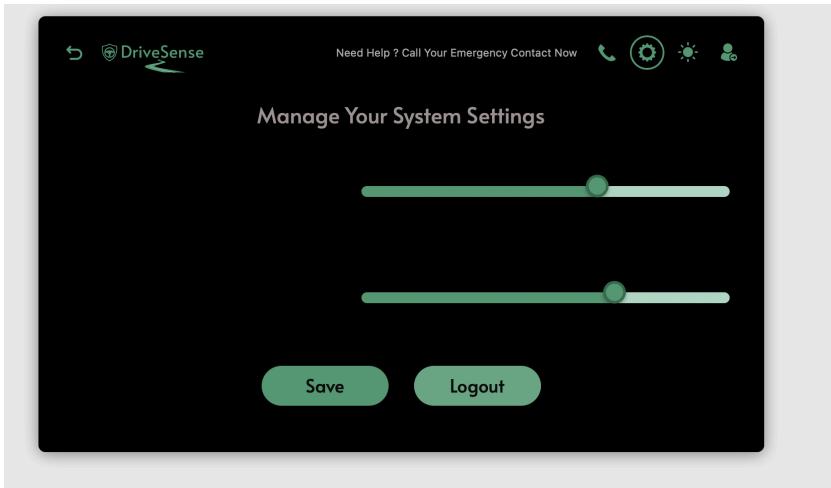
Kevin Dang:

- Working on REST API integration with website
- Preparing to improve yawning AI model

Hajer Fguir:

- Fixed Dark/Light mode issues on the ui screen

- Fixed the toggle bar
- Rest APIs Prep



Saurav Guduru:

- Writing and testing main thread with drivers

Issues and Resolutions:

Issue: None

Status: N/A

Resolution: N/A

Plans for next week:

Hardware Goals:

- 3D print first prototype for main body

Software Goals:

- Fully integrate Twilio APIs with screen UI application
- Fully finish the screen UI Frontend and prepare APIs
- Begin development to improve AI model

Management Board Screenshots:

The management board displays the following tasks across four columns:

- BACKLOG (12 items):**
 - Upload event logs to database (INTEGRATION WITH INTERNET)
 - Final Project Integration (TERM 2 INTEGRATION)
 - Midterm Project Report - Term 2 (MIDTERM PRESENTATIONS - TERM 2)
 - Final Presentation Slide Deck - Term 2 (FINAL PRESENTATIONS - TERM 2)
 - Final project demonstration (FINAL PRESENTATIONS - TERM 2)
 - Final Project Report - Term 2 (FINAL PRESENTATIONS - TERM 2)
 - Video capture feature (INTEGRATION WITH INTERNET)
 - Dynamic driver status (DISPLAY UI DEVELOPMENT)
 - Update logo (WEBSITE FUNCTIONALITIES)
 - Reset password functionality (WEBSITE FUNCTIONALITIES)
 - Display driver location (WEBSITE FUNCTIONALITIES)
- TO DO (5 items):**
 - Store account information with firebase (WEBSITE FUNCTIONALITIES)
 - Get measurements for new hardware (AR)
 - Final CAD Iteration (TERM 2 INTEGRATION)
 - AI model development (LOC-148) (AR)
 - Stereo Camera Depth model development (LOC-149) (AR)
- IN PROGRESS (8 items):**
 - Add storage interface with MCU (FIREBASE CLOUD DATABASE)
 - Integration with database (DISPLAY UI DEVELOPMENT)
 - Login Authentication (WEBSITE FUNCTIONALITIES)
 - Write unit tests for sensors (TESTING)
 - Create REST API for sensor data (FIREBASE CLOUD DATABASE)
 - Redesign CAD (CAD DEVELOPMENT)
 - Implement Twilio with the screen application (DISPLAY UI DEVELOPMENT)
 - Test Twilio outgoing messaging/calling from device (DISPLAY UI DEVELOPMENT)
- DONE (3 items):**
 - Create a driver for stereo camera (DRIVER IMPLEMENTATION)
 - Design REST APIs for User Interface (USER INTERFACE INITIALIZATION)
 - UI Screen Development React JS (DRIVER IMPLEMENTATION)

A '+ Create' button is located at the bottom left of the In Progress column.

Figure 1 - General Management Board

IN PROGRESS 8		
Add storage interface with MCU		
FIREBASE CLOUD DATABASE		KD
<input type="checkbox"/> LOC-49		
Integration with database		
DISPLAY UI DEVELOPMENT		
<input type="checkbox"/> LOC-124		KD
Login Authentication		
WEBSITE FUNCTIONALITIES		
<input type="checkbox"/> LOC-113		SG
Write unit tests for sensors		
TESTING		
<input checked="" type="checkbox"/> LOC-126		KT
Create REST API for sensor data		
FIREBASE CLOUD DATABASE		
<input type="checkbox"/> LOC-108		KT
Redesign CAD		
CAD DEVELOPMENT		
<input checked="" type="checkbox"/> LOC-138		AR
Implement Twilio with the screen application		
DISPLAY UI DEVELOPMENT		
<input checked="" type="checkbox"/> LOC-140		KT
Test Twilio outgoing messaging/calling from device		
DISPLAY UI DEVELOPMENT		
<input checked="" type="checkbox"/> LOC-141		KT

Figure 2 - This Week's Sprint

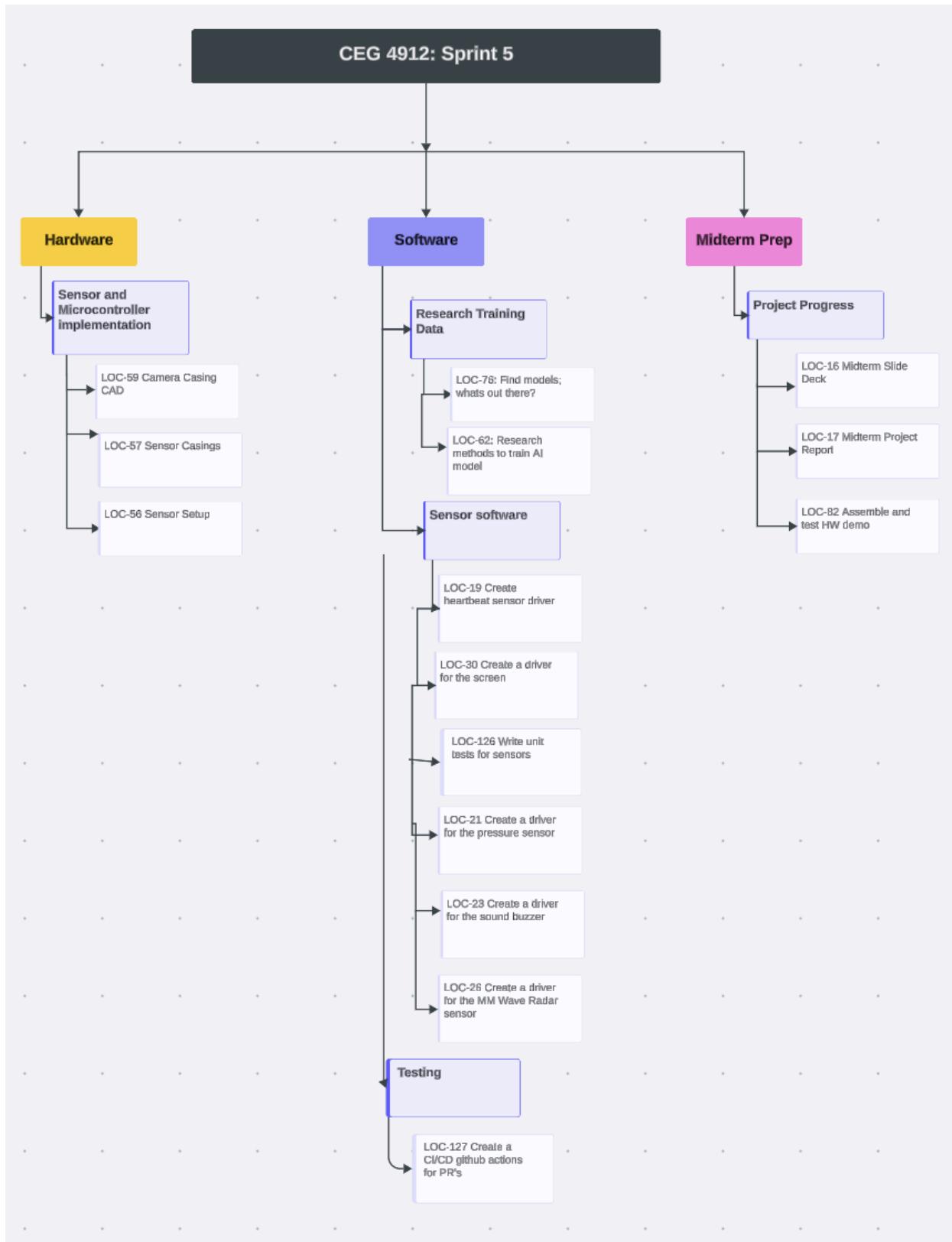


Figure 3 - WBS

Additional Notes: