

CEG4913 Weekly Progress Report

Week #: 9

SCRUM/Sprint No. 16

Group Number: 3

Date: November 20th, 2025

One line summary of progress: Finalized the enclosure and camera mounts, completed major UI/API features, improved driver management and event logging, and began integration of all aspects of the project.

Work Completed

Hardware:

- Designed full enclosure for main body
- Test fitted camera mounts

Software:

- Forgot/reset password implementation completed
- Began implementing the ability to sort drivers
- Completed login/driverSelection APIs on the UI Screen

Team Member Contributions:

Aaditya Shah:

- Switched fatigue detection model to opencv

Abdullah Ramadan:

- Designed new final full enclosure for parts, test-fitted camera mounts

Keith Tran:

- Completed twilio implementation and tested its functionality

Kevin Dang:

- Sorting drivers function implemented
- Allow different accounts to have access to different drivers
- Updated eventlog page

Hajer Fguir:

- Worked on the Events APIs for the UI Screen
- Completed the Screen Brightness Implementation

Saurav Guduru:

- Completed yawning and alertness machine learning model

Issues and Resolutions:

Issue: None

Status: N/A

Resolution: N/A

Plans for next week:

Hardware Goals:

- Print full enclosure for body and assembly final design

Software Goals:

- Pull and display sensor data on website
- Display pictures/videos when an event is made
- Upload sensor data and images/videos for website to display
- Complete both website and screen UI

Management Board Screenshots:

The management board displays tasks across four columns:

- BACKLOG**: A large column on the left containing a '+ Create' button.
- TO DO**: A column with one item: "Display driver metrics in the drivers' eventlog" under **WEBSITE FUNCTIONALITIES**. It includes a checklist for LOC-153 and a progress indicator for KD.
- IN PROGRESS**: A column with five items:
 - "Final CAD Iteration" under **TERM 2 INTEGRATION**. Status: LOC-134, KD.
 - "Implement driver card status colors updating real time" under **WEBSITE FUNCTIONALITIES**. Status: LOC-152, KD.
 - "Final Project Integration" under **TERM 2 INTEGRATION**. Status: LOC-69, KD.
 - "Final project demonstration" under **FINAL PRESENTATIONS - TERM 2**. Status: LOC-135, KT.
 - "Final Presentation Slide Deck - Term 2" under **FINAL PRESENTATIONS - TERM 2**. Status: LOC-40, SG.
- DONE**: A column with ten items:
 - "Reset password functionality" under **WEBSITE FUNCTIONALITIES**. Status: LOC-117, KD.
 - "AI model development". Status: LOC-148, SG.
 - "Write unit tests for sensors" under **TESTING**. Status: LOC-126, KT.
 - "Midterm Project Report - Term 2" under **MIDTERM PRESENTATIONS - TERM 2**. Status: LOC-43, KT.
 - "Get measurements for new hardware". Status: LOC-144, AR.
 - "Sorting drivers functionality" under **WEBSITE FUNCTIONALITIES**. Status: LOC-150, KD.
 - "Configure different dashboard access for different accounts" under **WEBSITE FUNCTIONALITIES**. Status: LOC-151, KD.
 - "Add storage interface with MCU" under **FIREBASE CLOUD DATABASE**. Status: LOC-49, KD.
 - "Driver status for individual drivers" under **FIREBASE CLOUD DATABASE**. Status: LOC-157, KT.

Figure 1 - General Management Board

IN PROGRESS 12		
Final CAD Iteration TERM 2 INTEGRATION		
LOC-134		9
Display driver metrics in the drivers' eventlog WEBSITE FUNCTIONALITIES		
<input checked="" type="checkbox"/> LOC-153		KD
Implement driver card status colors updating real time WEBSITE FUNCTIONALITIES		
<input checked="" type="checkbox"/> LOC-152		KD
Final Project Integration TERM 2 INTEGRATION		
LOC-69		9
Final project demonstration FINAL PRESENTATIONS - TERM 2		
LOC-135		9
Final Presentation Slide Deck - Term 2 FINAL PRESENTATIONS - TERM 2		
LOC-40		9
Final Project Report - Term 2 FINAL PRESENTATIONS - TERM 2		
LOC-39		9
Video capture feature INTEGRATION WITH INTERNET		
LOC-132		36
Automatic event generation for drivers WEBSITE FUNCTIONALITIES		
<input checked="" type="checkbox"/> LOC-154		36
Create REST API for sensor data FIREBASE CLOUD DATABASE		
LOC-108		KT
Stereo Camera Depth Model Development		
<input checked="" type="checkbox"/> LOC-149		AS
Dynamic driver status DISPLAY UI DEVELOPMENT		
LOC-122		KT

Figure 2 - This Week's Sprint

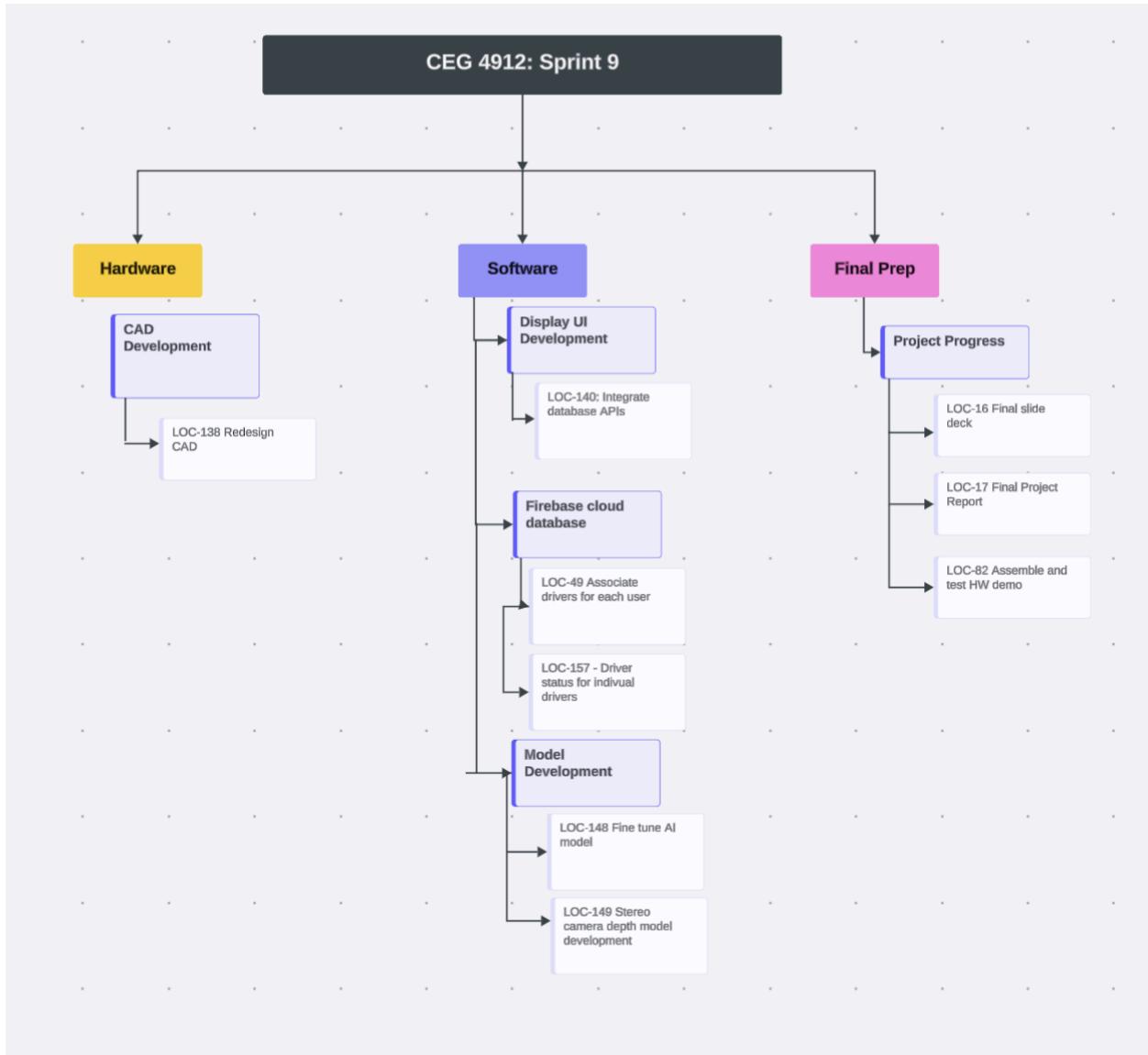


Figure 3 - WBS

Additional Notes: