CEG4913 Weekly Progress Report

Week #: 4
SCRUM/Sprint No. 12
Group Number: 3
Date: October 2nd, 2025

One line summary of progress:
Development of database completed and dockerized Jetson development for remote access.

Work Completed

Hardware:

- Hardware has arrived
- Enabled CUDA on the jetson

Software:

- Database fully setup
- Dockerized Jetson dev environment
- Integrated APIs
- Designed APIs for UI screen
- Developed the three pages of the UI screen

Team Member Contributions:

Aaditya Shah:
- Enabled CUDA on jetson
- Debugged use of CPU instead of GPU for python models

Abdullah Ramadan:
- Fixed CI pipeline on github actions (file syntax and pr naming convention)
- Added documentation to commit using pull requests
- Got HW specifications

Keith Tran:
- Started to work on Twilio integration

- Started implementation for sensor data APIs

Kevin Dang:
- Integrated CRUD APIs for users
- Researched login authentication

Hajer Fguir:
- Developed the 3 first pages (Login page, Driver Selection Page, Status processing page) of the UI screen using React - Light/dark Mode
- Prepared the environment for backend integration
- Started the Midterm Presentation Slide Deck

Saurav Guduru:
- Debugged issues setting up database secret keys
- Completed research for main thread usage

Issues and Resolutions:

Issue: None
Status: N/A
Resolution: N/A

Plans for next week:

Hardware Goals:

- Prepare demo for midterm
- Test the new hardware that arrived

Software Goals:

- Update slide deck for presentation
- Continue with API integration and testing
- Continue with the new UI Screen dev
- Integrate backend APIs into the UI screen pages
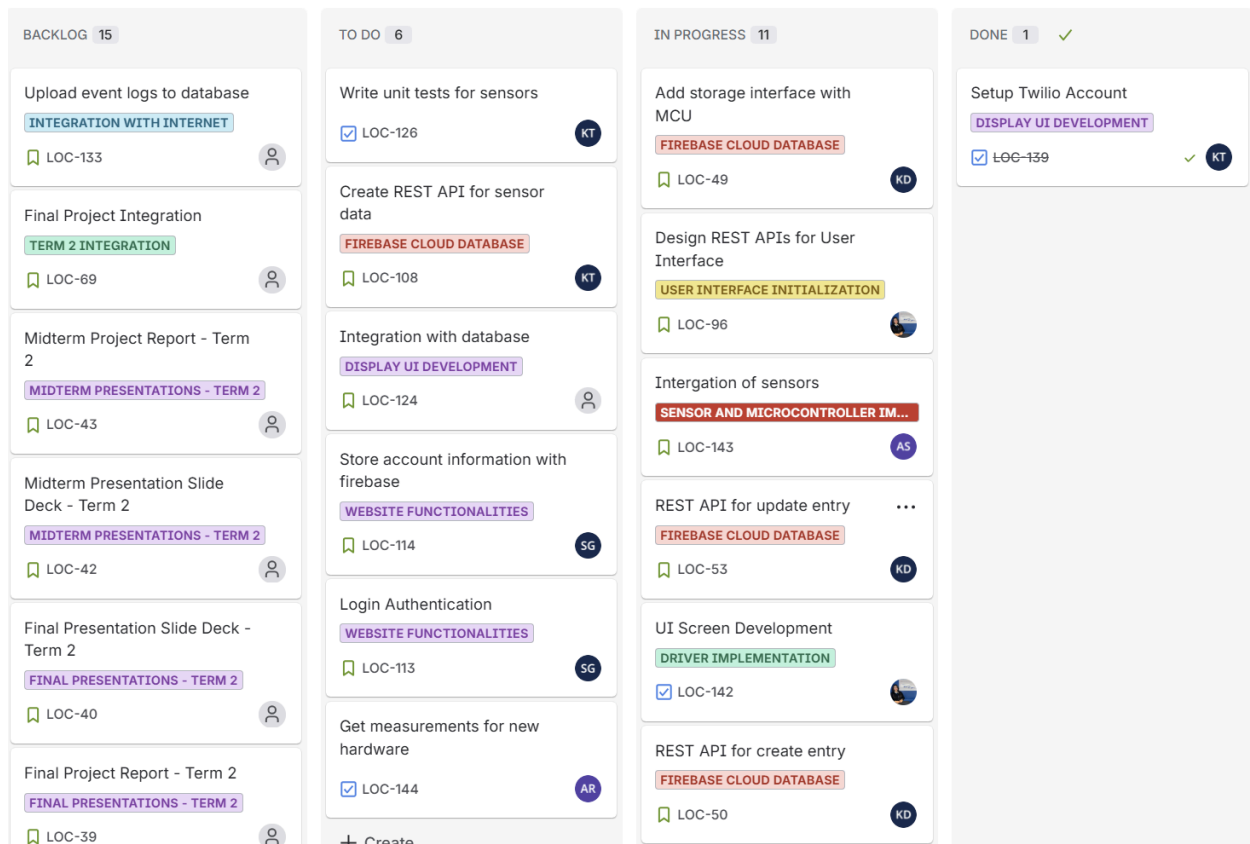- Figure out jetson GPU usage for models

Management Board Screenshots:

Figure 1 - General Management Board

Add storage interface with MCU

FIREBASE CLOUD DATABASE

🔖 LOC-49 KD

Design REST APIs for User Interface

USER INTERFACE INITIALIZATION

🔖 LOC-96

Intergation of sensors

SENSOR AND MICROCONTROLLER IM...

🔖 LOC-143 AS

REST API for update entry

FIREBASE CLOUD DATABASE

🔖 LOC-53 KD

UI Screen Development

DRIVER IMPLEMENTATION

☑ LOC-142

REST API for create entry

FIREBASE CLOUD DATABASE

🔖 LOC-50 KD

REST API for delete entry

FIREBASE CLOUD DATABASE

🔖 LOC-52 KT

Redesign CAD

CAD DEVELOPMENT

☑ LOC-138 AR

Create a driver for stereo camera

DRIVER IMPLEMENTATION

🔖 LOC-26 AS

Sensor Setup

SENSOR AND MICROCONTROLLER IM...
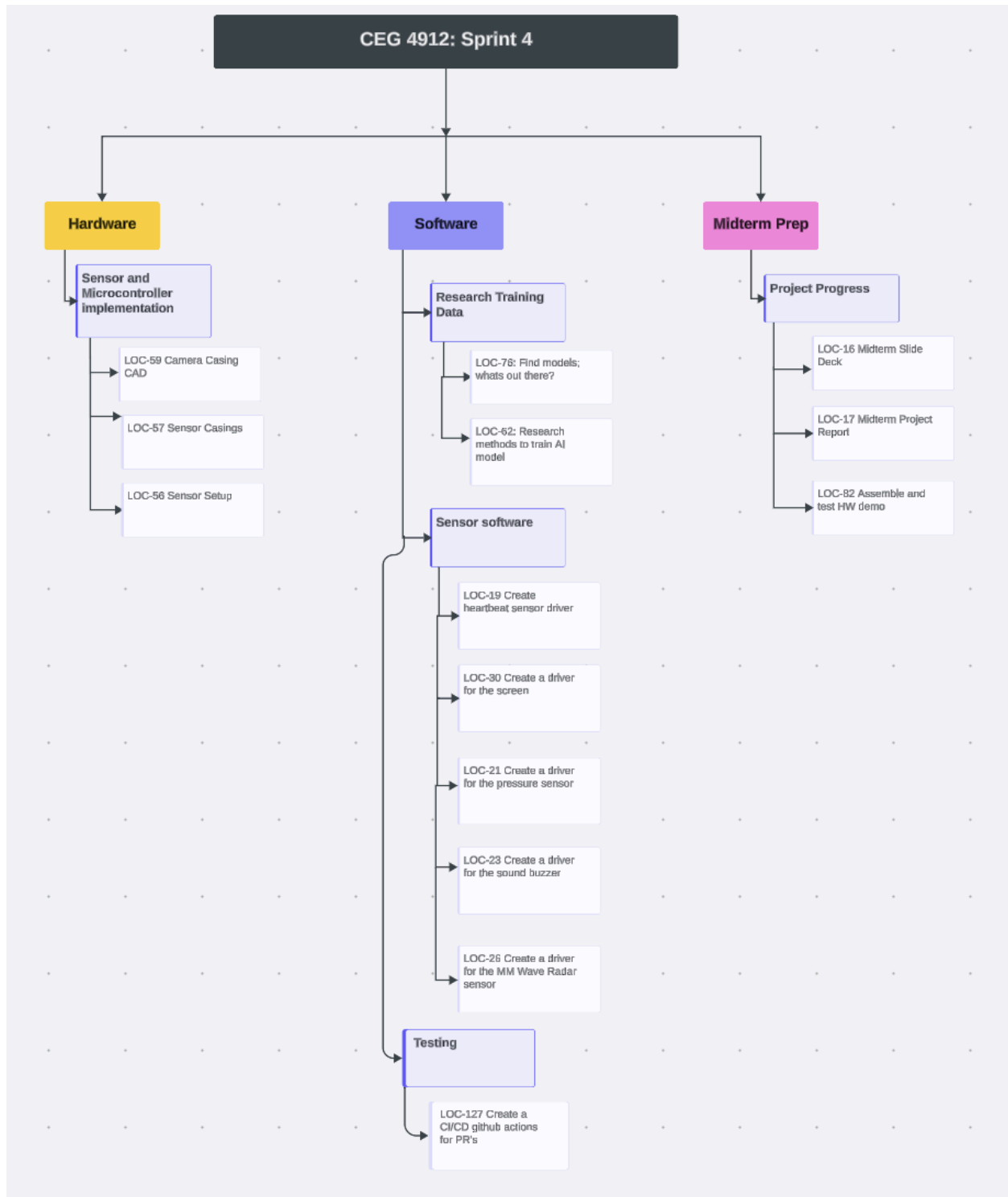
🔖 LOC-56 🚩 AS

Create a CI/CD github actions for PR's

☑ LOC-127 AR

Figure 2 - This Week's Sprint

Figure 3 - WBS

Additional Notes: