CEG4913 Weekly Progress Report

Week #: 6
SCRUM/Sprint No. 14
Group Number: 3
Date: October 30th, 2025

One line summary of progress: Finalized the main body CAD prototype, advancing API integration, refining AI model, and developing login authentication and UI features.

Work Completed

Hardware:

- Modified and finalized main body CAD prototype

Software:

- API integration with website
- AI model research
- Login authentication development

Team Member Contributions:

Aaditya Shah:
- Working on depth scanning model

Abdullah Ramadan:
- Modified main body prototype

Keith Tran:
- Working on Twilio API integration

Kevin Dang:
- Working on API integration with website
- Researched methods to improve yawning AI model

Hajer Fguir:
- Finished the UI Screen Light/Dark Mode
- Prepared env for the API integration

Saurav Guduru:
- Working on login authentication for website

- Researched methods to improve AI model proficiency

Issues and Resolutions:

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

Plans for next week:

Hardware Goals:

- Print main body prototype

Software Goals:

- API integration with website
- Fully integrate Twilio APIs with screen UI application
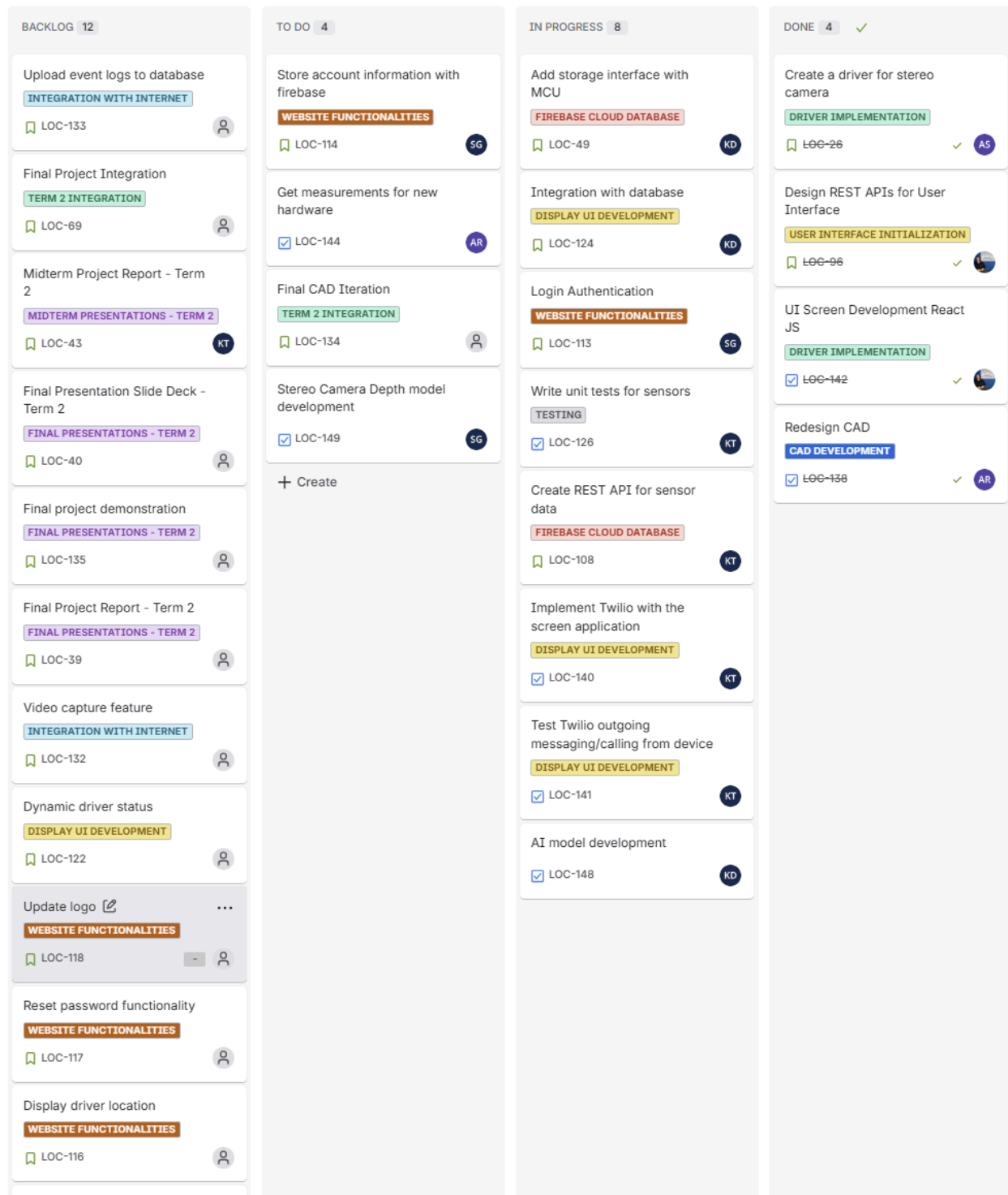- Continue developing AI models

Management Board Screenshots:

Figure 1 - General Management Board

IN PROGRESS 9

Add storage interface with MCU

`FIREBASE CLOUD DATABASE`

📑 LOC-49   KD

Integration with database

`DISPLAY UI DEVELOPMENT`

📑 LOC-124   KD

Login Authentication

`WEBSITE FUNCTIONALITIES`

📑 LOC-113   SG

Write unit tests for sensors

`TESTING`

☑ LOC-126   KT

Create REST API for sensor data

`FIREBASE CLOUD DATABASE`

📑 LOC-108   KT

Implement Twilio with the screen application

`DISPLAY UI DEVELOPMENT`

☑ LOC-140   KT

Test Twilio outgoing messaging/calling from device

`DISPLAY UI DEVELOPMENT`

☑ LOC-141   KT

AI model development

☑ LOC-148   KD
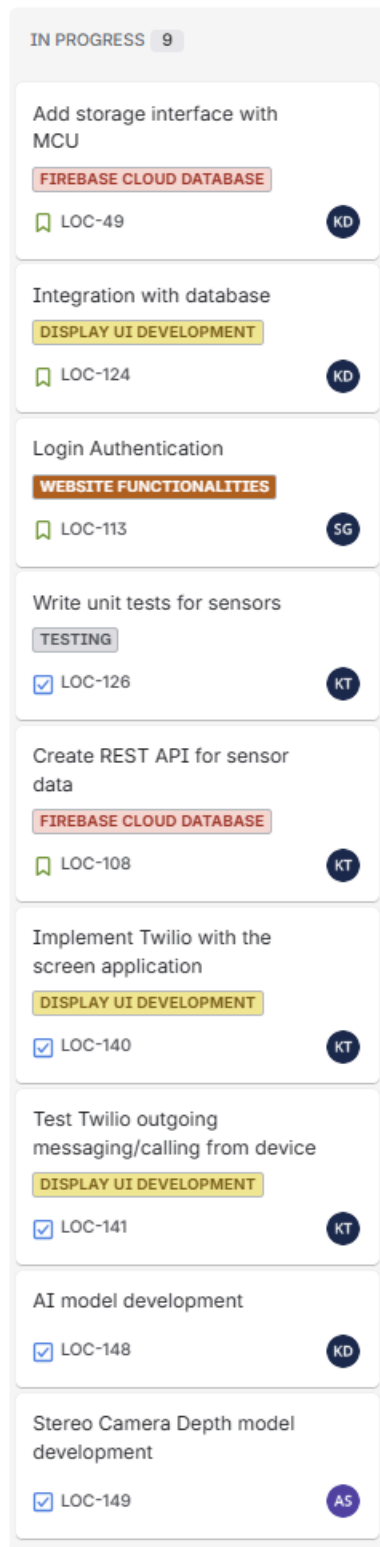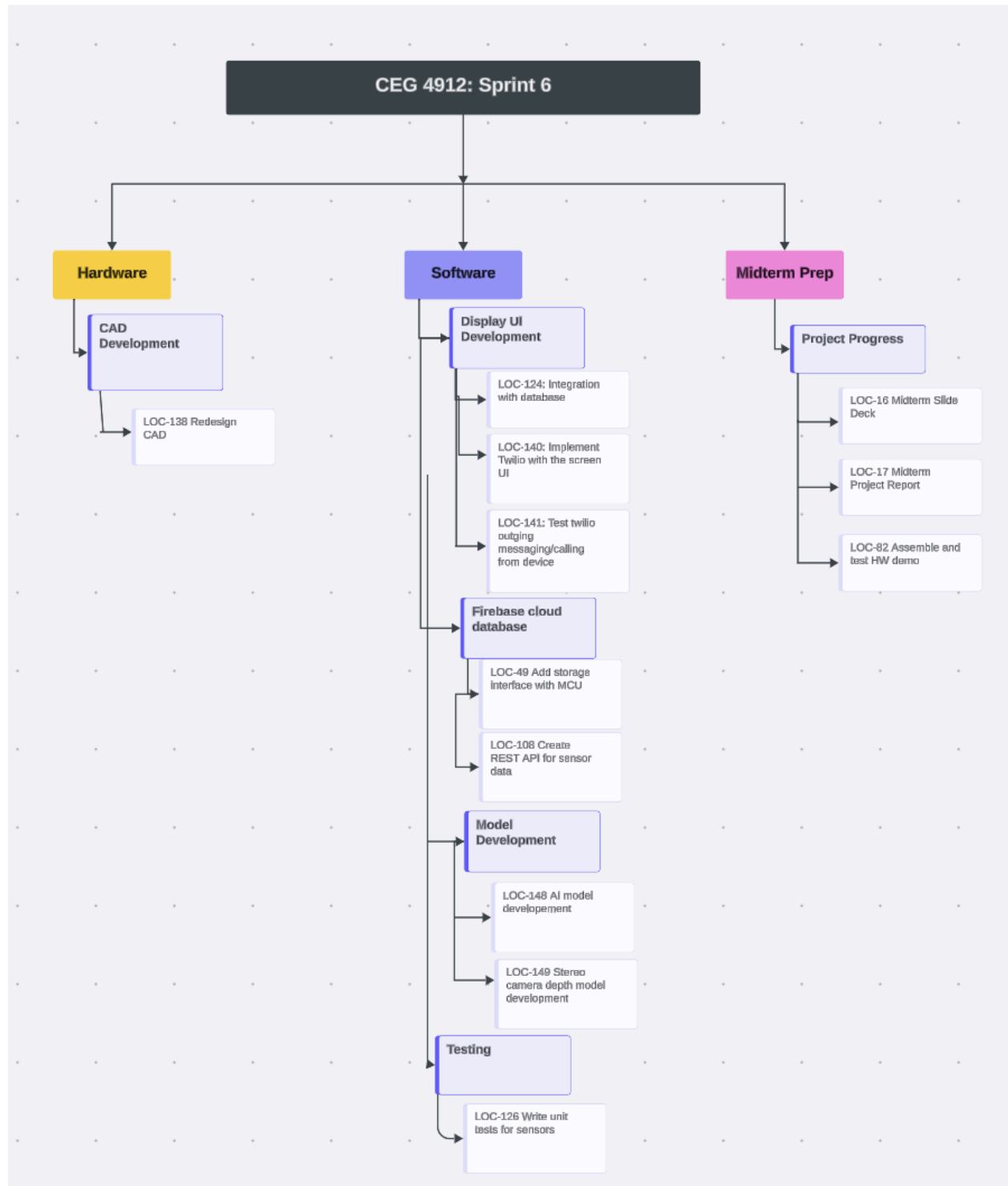

Stereo Camera Depth model development

☑ LOC-149   AS

Figure 2 - This Week's Sprint

Figure 3 - WBS

Additional Notes: