FSW Subteam
Weekly Updates, Spring 2025

Week 1

Team Progress:
- Onboarded 4 new members onto the FSW team
- Feature and personnel planning for every subsystem for Spring 2025:
    - https://github.com/cmu-argus-2/FSW-mainboard/milestones
    - https://github.com/cmu-argus-2/FSW-mainboard/issues

Individual Updates:
Perrin Tong
- Updated IMU driver to output uncalibrated gyro + magnetometer readings
- Reduced IMU memory footprint from 9% to 2%
- FlatSat planning

Week 2

Team Progress:
- FlatSat development:
    - Fuel gauge IC now integrated on FlatSat and EPS task
    - Started interfacing with avionics for acquisition of FlatSat peripheral boards
        - Battery board, solar panels
    - Testing XY boards and preparing for ADCS testing and calibration
- Comms - CDH integration:
    - Implementing basic commands to be transmitted from GS and executed on SC with a response back to the GS

Individual Updates:
Perrin Tong
- Updated firmware to include adafruit register
- Completely removed middleware from emulator + FSW
- Gyro+Magnetometer noise data collection
- Assembling FlatSat + testing boards for ADCS
- Designing new time processing module to encapsulate built-in time module, RTC, GPS and CMD.

Ankita Chatterjee
- Copied in MAX17205 (fuel gauge) driver and added fuel gauge data logging to the EPS task / integrated it into FSW

Alexis Duong

- Implemented SWITCH_TO_STATE and REQUEST_TM_HEARTBEAT Commands
- Updated the Command queue between comms and CDH to be a single element queue
- Added a Response queue that will allow Comms to get the status of a command that was executed by CDH

Michelle Heo
- Finalized flat sat layout and laser cut. Asked for longer flexible ribbon cables to accommodate for new design
- Converted RC Net to ONNX model, converting ONNX model to TensorRT model

Alena Lu
- Removed temp simulation directory from FSW mainboard repo, to restructure w/GNC sim backend
- Ran with current CMake version on sim interface branch, lowering CMake version for Ubuntu 20 still in progress