

Akshay Hinduja Sorted By Project

702108 - Deployable AI

- Setup Nvidia Orin AGX for new sensor head (Week 38)
- Setup Nvidia Jetson AGX Orin (Week 39)
- Test camera setup (Week 39)
- Setup Nvidia Deepstream for CTI Rogue carrier board (Week 40)
- Setup allied vision camera on AGX (Week 41)
- Setup allied vision camera on AGX (Week 42)
- Test multi-cam setup on AGX Orin (Week 44)
- Start writing scripts to control cameras through python (Week 44)
- Write setup documentation (Week 44)
- Wrote python scripts to leverage gstreamer library to run cameras on agx orin (Week 45)
- Troubleshoot issues with multicam. Only one camera is responsive (Week 45)
- Contact Connect Tech for possible solutions (Week 45)
- Debug hardware limitations on AVT cameras not getting advertised fps. (Week 46)
- MIPI cables do not have a rigid connections and prone to disconnections easily (Week 46)
- Troubleshoot camera board issue with Connect Tech. Unable to use all ports, with at least 2 not showing camera feed (Week 47)
- Contact allied vision onto why we are not getting advertised fps at full resolution (Week 47)
- Test issues with Connect Tech JCB005 board. Conclusion is to RMA board and trye another one. Inconsistent connection issues made it impossible to run 3+ cameras at full res and full fps (Week 48)
- RMA request sent for JCB005 board which had anomalous behavior in 4 and 6 cam mode, making it difficult to get full resolution images at 60fps. (Week 49)

902101 - LRAUV Technology Development

- Start familiarizing with LRAUV simulator codebase. (Week 32)
- Plan to get everything installed, and test logs to visualize real data in simulator (Week 32)
- Working on getting lrauv simulator setup on laptop, faced some issues with broken docker image. Trying internal one (Week 33)
- Osrf docker image would not compile, got image from Michael which runs example script (Week 34)
- Facing issue with running tethys simulation, working on bug finding (Week 34)
- Writing reports on bugs faced and outdated packages to work around. (Week 34)
- Received desktop from IS to retry docker as laptop GPU gave compatibility issues. (Week 36)

- Setup LRAUV-tools on loaner desktop (Week 39)
- Get started with Gazebo log playback on Omega Omen (Week 41)
- Get started with Gazebo log playback on Omega Omen (Week 42)
- Finished setup of lrauv sim on Omega-omen, dive deeper into ros message playback (Week 43)
- Identified python library issue with lcm in docker image. Turning the python requirement off gives a successful build, but may have missing pieces. (Week 44)
- Meet with Quinn to go through LRAUV workflow. More understanding gained on where to and which repos to look at for gazebo log playback project. (Week 46)
- Go through lrauv-application documentation and decoding log files (Week 47)
- Going through relevant repositories, particularly TethysDataViz to plan simulator replay approach (Week 48)
- Go through tethys visualizer tool reading nc4 data. Will reverse engineer to work on reading nc4 data and see inroads to gazebo sim. (Week 49)

902204 - Scalable Robotics

- Assist in setup for cruise on 8/8 (Week 32)
- Go through driver repositories for gemini and oculus sonars (Week 32)
- Go through initial process familiarity with Eric (Week 36)
- Get requirements for Norbit driver after discussion with Giancarlo (Week 36)
- Work on initial architecture design for driver (Week 36)
- Working on Norbit WBMS and FLS driver (Week 37)
- Able to get raw bathymetry data recorded and decoded (Week 37)
- Current focus on cleaning up architecture to be more modular (Week 37)
- Aim to get translations to lcm/ros2 in the next week set up (Week 37)
- Continue Norbit WBMS development, working on visualizing bathymetry data (Week 38)
- Norbit WBMS driver: Fixed visualization issues, working on LCM message generation and reading GUI config files in headless state (Week 39)
- Norbit WBMS driver LCM broadcast (Week 40)
- Finished python driver lcm broadcast and viewer (Week 41)
- Finished python driver lcm broadcast and viewer (Week 42)
- Finish up lcm messages for metadata for Norbit python driver (Week 43)
- Prepare for cruise 10/28 (Week 43)
- Update Blue boat driver to latest version (Week 43)
- Cruise, Mon Oct 28 2024, all working (Week 44)
- Write documentation (Week 44)
- Bug fixes for gui-control behaviour (Week 45)
- Integrate s7k logging into alpha driver (Week 45)
- Prepare beta driver system (Week 45)
- Assist Eric and Johann to get blueboat ready for maldives trip (Week 46)
- Look into s7k conversion. Not as straightforward, and may have limitations on norbit side (Week 46)
- Coordinate with Norbit to expand API control for driver (Week 46)
- Prepare C++ beta (Week 46)

- Implement water column and snippet data reading for Norbit driver (Week 47)
- Assist Mauro with s7k file generation (Week 47)
- Start beta development for C++ driver (Week 47)
- Finished snippet and water column data streaming in alpha driver (Week 48)
- Sync with Mauro for s7k translation (Week 48)
- Add LCM broadcasting for water column and snippet raw data for Norbit to beta python driver (Week 49)
- Work on waterfall visualizer with Javiera (Week 49)

Out of Office

- WFH 9/4/2024
- WFH 9/11/2024
- WFH Wed Sept 25, Fri Sept 27, Wed Oct 2
- Marine Imaging Workshop
- WFH Wed Oct 2, Dentist 8am-10am
- Marine Imaging Workshop Oct7-11
- 12/5, 12/6 WFH
- 12/16-12/23 out for wedding

Out of Office 10/15 WFH

Out of Office 11/13 WFH, 11/20 possibly WFH, 12/2 WFH

Overhead