

sdmay20-47: Real Time Volumetric Analysis

Week 6 Report

November 4 - November 23

Team Members

Kenneth Lange — *Team Lead*

Alain Njipwo — *Chief Hardware Developer*

Luke Bell — *Chief Interface Developer*

Danill Olshanskyi — *Chief Software Developer*

Max Medberry — *Chief Backend Developer*

Summary of Progress this Report

Over the last weeks, We've been working on getting the drone trained to navigate the environment. We created the AI person to continuously move and reset every time the drone resets. More people's textures and animations were imported to the world to improve the neural network's ability to recognize. We have also been working on getting the Zed camera up and running on a Jetson and getting the initial commutations between the airsims and Pixhawk API. The Servo's control board has been installed and all the rotors are functioning as expected.

Pending Issues

During hardware calibration, the software ArduPilot is erroneously reporting that a crash has been detected.

Plans for Upcoming Reporting Period

During the next period, we will be working on the placement of the GPU and Zed camera's positioning and wiring on the drone. We will be contemplating and implementing features to make the physical drone more reliable during the test flight states. We will be doing more drone training to improve the neural network recognition.

Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Kenneth Lange	improving the environment to train the drone. Set up the person the drone follows as a "reward". Imported and implemented textures and animations to enable the neural network to have better recognition	8	0
Alain Njipwo	Soldered wires onto the new servo control board. Performed the installation and fully assembled the drone in preparation for test flights.	8	0
Luke Bell	Working on Interfacing the Jetson with the Zed camera. As well as interfacing	8	

	communications between airsims and pixhawk		
Danill Olshanskyi	improving the environment to train the drone. Set up the person the drone follows as a "reward". Imported and implemented textures and animations to enable the neural network to have better recognition	8	
Max Medberry	Working on Interfacing the Jetson with the Zed camera. As well as interfacing communications between airsims and pixhawk	8	

Gitlab Activity SummaryNothing to report.
