

Weekly Scrum Report

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Air-to-Ground Search 2/26/25

- What did you do this week?

This week was spent mostly in research, getting up to speed with the resources we will be using, such as Blazor and the Boeing provided Python script. During this research, we noticed that pybind11 would be a helpful library for simplifying data conversions between C++ and Python. It also allows us to use C++ specific features, such as overloading of functions, single and multiple inheritance, and STL data structures. It also has integrated numpy support, should we want to use it with the map generating code that was provided.

Another area we focused on this week was preparing our development environment for the beginning of the project. By utilizing resources within VS Code and Docker Desktop, we were able to configure a docker container that initializes on startup, ensuring that all the packages necessary to begin are installed and configured. With this container created, we are confident that each member can now develop the project on their own system without the risk of missing dependencies or libraries. With the ease of use of Docker and the assistance for repositories to utilize it through VS Code, every project should start by creating a development environment both for development and for packaging the end product to ensure its capability to run anywhere.

- What went well?

The group efficiently shared instructional videos and documentation to get others up to speed on certain topics such as numpy and blazor. Because we had already set up a group discord, we were able to easily communicate our goals regarding the project.

Implementing the Docker development environment worked very well for our group, having no issues for each member to be able to use it. Now that it is integrated with our repository, anyone can clone it, and as long as Docker is installed, can run our project.

- What could be improved?

Due to several external factors, work was slower this week among group members. Our entire group is on the Mars Rover Design Team at Missouri S&T, and this week happened to be the busiest week of the year, as we focused on filming systems and creating a video to get accepted into the University Rover Challenge for 2025. In addition to this, the career fair took priority for many members, as it was one of the final chances to lock down a job before graduation.

With this in mind, our team will begin the next week by planning out our schedules ahead of time and making any blockers known to the whole group. This will help us to plan around our busy schedules and ensure progress can still be made. This is also a very important routine to start as we are in the early stages of our project, because having a clear schedule for when features and functionalities should be completed will help significantly with meeting project deadlines.