Team Monthly Status Report:

1. Team Name: RED Teams MORTI
2. Where are you with your project in terms of your design and build milestones?

As of April 2nd, we have worked further and completed the UI elements and biometrics tracking portions of the requirements. We are still working on fully implementing our navigation methods and have started to implement the various tasks that the testing requires(Egress Procedure, Sample Collection, and ROVER control). These tasks have been partially implemented with menus setup but no functionality until the TSS was updated. We are now working on polishing our completed sections, and fully implementing the tasks with the new TSS 2.0.

* 1. Do you have concerns about reaching your milestones?
     1. Yes, we’ve been hard at work developing the various systems of our project but with delays in the final version of the TSS coming out with the updated information for the external tasks like the UIA Procedure, we are behind from our previous schedule with completing the remaining larger tasks of ROVER control, Egress Procedure, and Sample Collection.

1. Have you successfully deployed some of your builds to a device and tested it?

Yes, at each of our meetings team members usually deploy a few times as we iterate changes between the Unity Environment and the Hololens

* 1. How did it go?

We’ve found great success making builds and working with the equipment. Through our builds we’ve figured out how to pull and use the data on the hololens and work on the HUD in both sizing with the Hololens’s POV and colors against the background.

1. The anticipated test environment at NASA's Johnson Space Center will be outdoors during the evening/dark with low-angle floodlights to emulate the lunar south pole.
   1. Have you tested your design outdoors?

Yes, we have taken the project outside around the university to test for various things like the GPS tracking and visual elements visibility.

* 1. What challenges have you encountered in trying to build for the test environment?

Beyond normal bugs and errors that were quickly found and fixed, we haven’t had many challenges in building the project for our test environment. Lighting has seemed to be an issue, but it is a known issue with AR headsets like the Hololens 2.

1. Have you conducted any educational outreach opportunities in your community?

Yes, we had two events this month, with one at the university’s New Student Enrollment Day and another at the Nebraska Science Festival in Omaha.

* 1. How did it go?

The team was able to meet many new students and parents at the enrollment day for the college of engineering, promoting the club and NASA activities to future UNL students. At the Nebraska Science Festival, two of our members joined our advising professor in promoting VR and AR research and NASA activities at the university. They were able to present the project to numerous students, parents, and community members who were interested in our research and the activities the club promotes.

* 1. If not, what is your plan to begin conducting outreach?

1. Have you received any media coverage? If so please provide us with a link.
   1. Please share links to social media postings your team has made this month.
2. Please upload photos of your team working on your design, performing demonstrations, conducting outreach, etc. (you can send them as attachments or links)
3. How many times has the entire team met this month? Do you have a regular time and place to meet? If so, where and when?

The team meets every week on Thursday for a weekly work/standup meeting. These last for an average of 1.5-2 hrs and are hosted in a classroom of the Engineering Hall. The team also meets outside of these times to work on issues, either in person or over discord. The team has had biweekly meetings with our NASA Advisor James Berck to check in on our progress and get feedback.

* 1. Estimate the number of combined hours the team spent meeting this month.

An estimate of 20 hrs for the whole team time of the month of April.

1. How has your faculty advisor helped the team this month?
   1. Is there an area you need help with that they are not providing?

Professor Bourke has handled much of the admin work in setting the trip up and other activities as our main point of contact within the department. Professor Bourke was the one who presented on our project at the Nebraska Science Festival

1. How has your NASA mentor helped the team this month?

We had only 2 meetings with our mentor in the last part of March to the middle of April as James had an out of country vacation from mid to late april. We are currently trying to get a last meeting to check over our design and discuss test week procedures. We are also attempting to get a tour of his facility on JSC campus if at all possible, along with an in-person meeting for one of the meals during the week we’re there.

* 1. Is there anything the SUITS team can help you with regarding your mentor?

Not at this moment.

1. Is there anything else you would like the SUITS team to know? (We can't help if we don't know!