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?

The team has been hard at work developing the UI, Menus, and connecting the Telemetry stream. Our focus has been on these systems as all others rely on them for operation, mainly depending on the Telemetry stream data being accessed.

* 1. Do you have concerns about reaching your milestones?
     1. Yes, we had to refactor the project in the latter half of February to facilitate proper cooperative work due to many merge errors/conflicts from a bad initial git setup. This has delayed our work and thrown the team into a slightly different system with the use of MRTK 3 over 2 due to the improved menus and the hope to continue in that system in the future. Currently, we are still working on the UI/Navigation systems when our schedule had us begin development of the Egress procedure and other systems in March.

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

No, but we have tested other apps and the external tools NASA has shipped to us.

* 1. How did it go?

Members of the team have had a tough time connecting, setting up, and utilizing the GPS equipment due to a bad tracking signal. After leaving the GPS tool outside to develop a connection, it still didn't connect well, a situation others teams have claimed to face themselves. We’ve been able to have better luck once we saw the feedback and updates on the discord about others' issues with it.

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?

We haven’t tested our project outside yet, but we have tested other hololens apps outside, being the MRTK examples hub. This application contains all the various tools that MRTK has to offer us in development and gave us insight into the challenges of working in harsher/darker environments. Our testing occurred outside the Nebraska Innovation Campus parking lot. We weren’t able to use harsh lighting to simulate the Rockyard due to a lack of equipment at the time and plan to do so in future testing.

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

The color profile of menus and UI elements against the environment. From researching the issue, our UI designer Lindsey has provided a teal-blue tone that is supposed to work best, but we haven’t been able to compare it to other hues in a test environment. Our plan is to give the user some control over the Menu/UI color with a slider or the other options that MRTK3 gives us.

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

Yes, we sent members of the team to the Aviation STEM day at Oakview Mall in Omaha NE. This event was targeted at K-12 students in the Omaha Metro area. We also plan to have members give a class discussion of NASA activities at their former high schools and lead students in some form of related activity, such as an hour of code.

* 1. How did it go?

The outreach event at Oakview Mall went great, many community members spoke to our developers about the project and other NASA STEM activities. The members spoke to ~40 people about the project over a 2hr period.

* 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.

The team was featured in a state newspaper as a digital article, in both the Lincoln Journal Star and Omaha World-Herald: <https://journalstar.com/news/local/unl-engineering-teams-prepare-for-national-research-challenge-hosted-by-nasa/article_e8d87490-110a-5ea8-ab67-9981c22e4a84.html?utm_campaign=snd-autopilot&utm_medium=social&utm_source=twitter_JournalStarNews>

The club, along with RED Teams as its organization, we were promoted on UNL’s newly restarted Complete Engineering Podcast which is yet to be uploaded at this time:

* 1. Please share links to social media postings your team has made this month.

<https://twitter.com/redteamsUNL/status/1627740123356925952?cxt=HHwWgMC49ZPB8pYtAAAA>

<https://twitter.com/redteamsUNL/status/1626336993666912258?cxt=HHwWhMC-iaG49JEtAAAA>

<https://twitter.com/redteamsUNL/status/1625957527765614608?cxt=HHwWoIC85bfwx5AtAAAA>

<https://twitter.com/redteamsUNL/status/1622418866562269188?cxt=HHwWiICwpZ_X_oMtAAAA>

1. Please upload photos of your team working on your design, performing demonstrations, conducting outreach, etc. (you can send them as attachments or links)
2. 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 begun biweekly meetings with our appointed NASA advisor James Berck to get advice on the project and our careers.

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

An estimate of 22 hrs for the whole team time since school has started. In the winter break period(Jan 5th-Jan 21st), they met for ~10 hrs.

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. Besides his help in acquiring funding and using it, he has been a great resource on Unity thanks to the course he teaches and his involvement with the universities Game Dev Club.

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

We had only our first introductory meeting with James this last week due to schedule conflicts. Our first meeting went well as he talked about his career path at NASA and how we might best break into our interests for Careers/internships.

* 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!