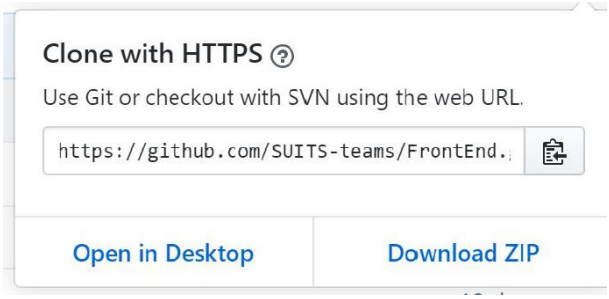
SUITS Telemetry Stream

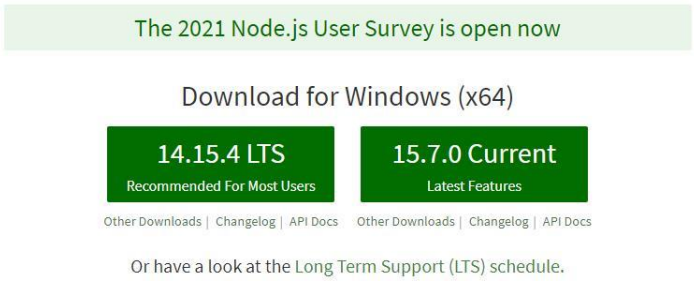
Dominic Dougherty, Nohemi Sepulveda, Liam Smego

This is a guide on how to utilize the NASA SUITS Telemetry Stream repos. It is assumed you are familiar with Github. Our preferred coding environment is VSCode, therefore we encourage student teams to use VSCode as well such that the steps outlined in this document can be replicated exactly. If using VSCode, be sure to install Git version 2.0.0 or higher.

1. Go to https://github.com/SUITS-2021
2. Clone the FrontEnd and BackEnd repositories to your machine to separate folders



3. Install Node.js to your machine: https://nodejs.org/en/
    - NOTE: make sure you download the Long Term Support (LTS) Version of Node.js. Currently that is version 14.15.4. Otherwise, the telemetry stream might not work.



4. Open “app.js” in the BackEnd directory. You should see a commented line that reads: //mongoose.connect()
    - Replace this with the following line: mongoose.connect('mongodb+srv://SUITS-tech_team:Tvstudent1!@cluster0.rqtoy.mongodb.net/test?retryWrites=true&w=majority')
5. Within the terminal in your coding environment, type “npm install” in BOTH the FrontEnd and BackEnd repositories and press enter. This will install all necessary dependencies for telemetry stream to run

```
PS C:\_suits\ts\v8\BackEnd> npm install
```

6. To run both repositories type “npm start”
    - For the BackEnd repository you should see something similar to the image below. This means all dependencies have installed correctly and that the server side is creating and outputting data correctly!

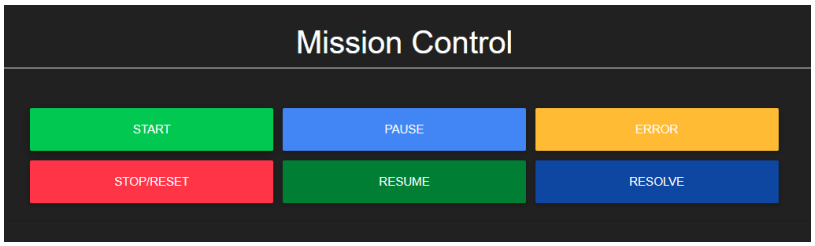
```
PS C:\_suits\ts\v8\BackEnd> npm start

> tutorial@1.0.0 start C:\_suits\ts\v8\BackEnd
> node app.js

Server is running on port 3000...
```

    - For the FrontEnd repository you should see something similar to this image. Again, this means all dependencies installed correctly. This may take a minute to compile.

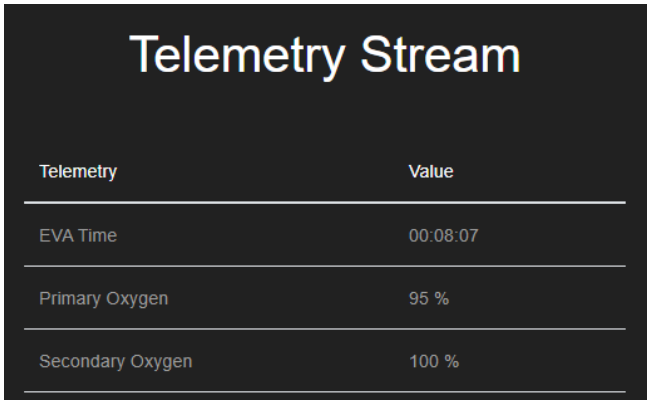
```
PS C:\_suits\ts\v8\FrontEnd> npm start

> suits@0.1.0 start C:\_suits\ts\v8\FrontEnd
> ng serve --port 4200 -o

** Angular Live Development Server is listening on localhost:4200, open your browser on http:/
/localhost:4200/ **
```

    - Go to https://localhost:3000/api/simulation/state to confirm that the server is outputting data
    - Go to http://localhost:4200/ to access the webpage
7. Now that both repositories are running, you should be able to see output from the telemetry stream on the webpage. To do this, scroll down on the webpage and click “START” under “Mission Control”
8. After pressing “START” values should begin to update as they draw from the server. Congrats, you have now connected both ends of the telemetry stream!
    - “STOP/RESET” will stop drawing values from the telemetry stream and refresh the page

- “PAUSE” will stop the telemetry stream, holding its current values and “RESUME” will continue the stream from the values held at pause



9. “ERROR” will cause an internal suit fan error to occur.
    - “Fan Tachometer” will rapidly drop simulating a fan failure
    - On test week there will be many more simulated errors that may occur and will be called randomly throughout the test to see how your UI responds!



10. “RESOLVE” will stop the current error and return suit status to normal
11. To stop the telemetry stream from running, type “ctrl + c” in the editor terminal