**Journal Report 1**

**8/28/23**

Today, I worked on contacting my mentor, Paul Kienzle. I filled out the forms necessary to attain remote access to the NCNR computing cluster. Specifically, I will be getting a computer that is able to remotely connect to the NCNR cluster. This cluster has a multitude of GPUs and CPUs for use. This past summer I was able to utilize Dask, a parallel computing library, to train my machine learning models. It allowed me to do hyperparameter tuning and find the best values as I could simultaneously start trials. I am wondering if I can utilize the TJ server and the GPUs we have in the SysLab to further lessen the training time and number of experiments. This is a future discussion to be had with Dr. Gabor if I choose to go with my anomaly detection project.

In class, I discussed with Dr. Gabor about my previous journal report. I came up with five ideas and the one with the most potential was LymeLyte. We discussed the possibility of applying this to whether a rash or skin blemish is worrisome. To apply this, we discussed getting in contact with my NIH connection. Instead of directly applying for access to datasets available at the NIH, the better plan would be to give my connection the code and tell him to run it on the data. This would allow me to access a large amount of data without the tediousness of filling out all the forms and security clearances needed to access the dataset. A NDA may have to be signed in order to prevent the NIH contact from taking credit and things of that nature.

Overall, I like this idea, but we were still discussing which of the five would be the best. We ruled out the jumping rover as it is more of an engineering problem and the blockchain idea as it will be tedious and too difficult.