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Guided Research Grad I
Week 7 Summary Report

As a refresher, my research topic is the application of Large Language Models (LLM) in prediction of maritime vessel trajectories.

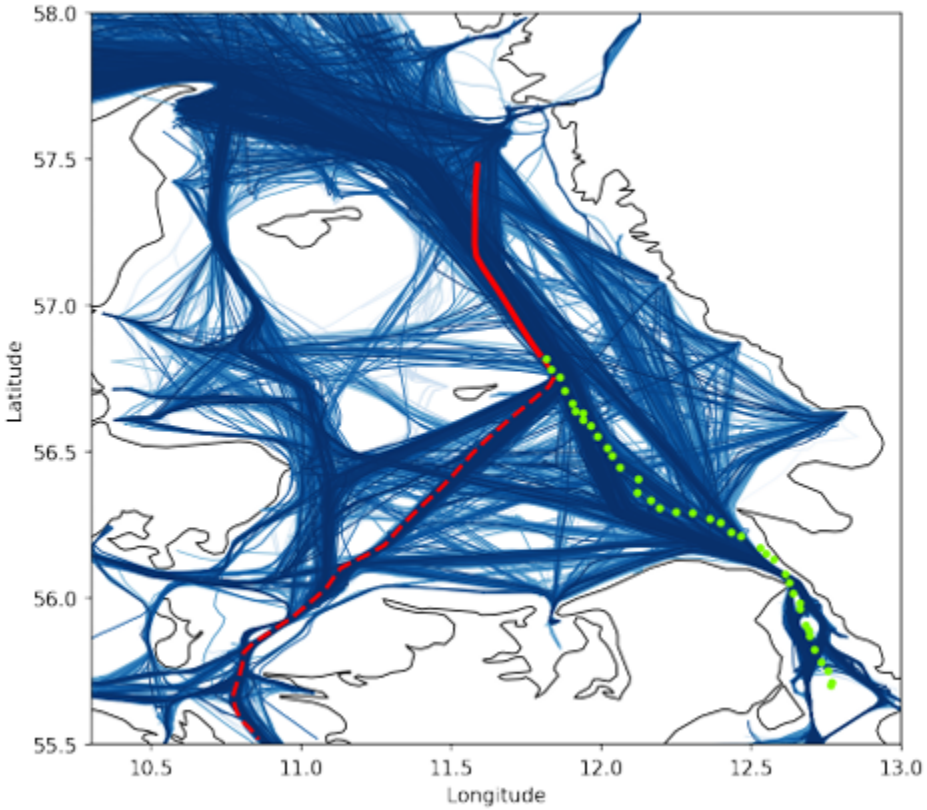

Figure 1. LLM input path in solid red, predicted output path in dotted green, and actual output path in dashed red.

This week I finally started to do fine-tuning. I learned how to generate an Open AI training file from my data set, and started a training job. After hours, the job failed, saying that it would exceed my billing limit of $20 in order to run the job. I cut my training set in half and tried again. Again after hours, same error message. Then I cut it to ⅓, then ¼, then ⅛, then 1/16, then 1/32, then 1/64, then 1/128, and it finally worked. That series of events took place over many days, because I would run a job before work, only to find that it failed after work. I would then run a new job after work, it would still be running before bed. Then I would wake up to a failure message, and repeat the whole process. Open AI should really do a better job at providing a way to estimate the cost, or prioritize this check to provide immediate feedback. My original training set was 26.3MB, and I had to reduce it to 177KB to stay under $20, which is really disappointing. However, with the fine tuning complete I could then run the evaluation and plotting code. This was the final technical task before preparing for the final presentation.