From: **Meeting Summary with AI Companion** no-reply@zoom.us
Subject: [EXTERNAL] Meeting Summary for Richard Hoehn's Zoom Meeting
Date: March 30, 2025 at 2:17 PM
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Meeting summary for Richard Hoehn's Zoom Meeting (03/30/2025)

Quick recap

Richard and Isaiah discussed their ongoing project involving training data and epochs, including installation processes, GPU usage, and potential paper topics. They troubleshooted various technical issues, such as errors in running programs and problems with directories, while also sharing personal updates about their careers and education. The conversation covered Richard's startup idea in agriculture technology and their collaborative efforts to run long-duration jobs on computing clusters, with plans to analyze the resulting data in future meetings.

Next steps

• Isaiah to investigate how to change the percentage of data used for training in the code.
• Isaiah to analyze and graph the metrics data from the checkpoints to see if any patterns are emerging.
• Isaiah to explore ways to reduce the number of validation steps or epochs required.
• Richard to continue running the experiment on the research partition for 48 hours.
• Isaiah and Richard to meet again as a group on Monday or Tuesday to discuss progress and findings.
• Isaiah to look into submitting the experiment as a job rather than an interactive session for longer run times.
• Richard to consider pulling down the metrics CSV file and creating graphs from it.

Summary

Training Data and Epochs Progress

Isaiah and Richard discussed the progress of their project, which involves training data and epochs. They discussed the potential of reaching 10,000 epochs in a few hours and 100,000 in a few hours, but acknowledged that reaching 1 million epochs would take a while. They also discussed the accuracy of their training data and the possibility of overfitting. Richard asked about the setup of the project, and Isaiah explained that he has been experimenting with both Slurm jobs and interactive shells on cluster machines.

Python Program Installation and Cleanup

Richard and Isaiah discussed the process of installing and running a Python program. Richard suggested that he could run the program to ensure the steps were reproducible. They also discussed the need to clean up the current setup, which involved cloning a repository and another one inside it. Isaiah mentioned that they had to use a pull request to fix the dependencies, as the API had changed since the program's release. They also discussed the possibility of reducing the percentage used for training. Richard suggested that they could write about their findings in a paper, particularly about the time it took to run the program on a single GPU.

GPU Program Installation and Execution
Isaiah and Richard discussed the process of running a program on a GPU. Richard was guided by Isaiah on how to SSH into the Hamilton system and install necessary modules. They also discussed the potential of duplicating a certain process, with Richard expressing interest in running the program for a paper. The conversation ended with Richard successfully installing the necessary modules and Isaiah explaining how to run the program.

Richard and Isaiah's Program Issues
Richard and Isaiah discussed issues with running a program. Richard encountered errors and decided to start over, deleting and reinstalling the program. They also discussed Isaiah's upcoming graduation and his plans to look for a job in the data science field, particularly in aerospace or automotive industries.

Richard's Home Directory Issues
Richard and Isaiah discussed issues with Richard's home directory and cache directory. They decided to delete the cache directory and reinstall the environment. They also discussed Richard's PhD program and his job, which he found stressful due to the long hours. Isaiah shared that he had an interview for a data engineering role with a firm that does wildfire modeling.

Ayrton's Agriculture Technology Optimization
Richard discussed his startup, Ayrton, which aims to improve agriculture technology by optimizing the routing of equipment and services. He explained that farmers no longer own their combines or tractors, but instead, they buy the services of distributors who provide the equipment and services. Richard also mentioned the challenges of coordinating and routing the equipment, including the need to wash the nozzles when switching different types of fertilizer. He shared his plans to write software to optimize route scheduling with multiple dimensions. Additionally, Richard discussed the complexities of routing fuel tankers to various locations, considering the different types of fuel and the need to optimize the use of each tank in the truck.

Infrastructure as Code and Deployment
Richard discussed his recent work on infrastructure as code, using Docker for the back end and AWS for deployment. He also mentioned his use of infrastructure as code for setting up virtual private subnets, load balancers, and internet gateways. Richard expressed interest in graphing the curve and pumping data somewhere. Isaiah suggested looking into the metrics and the checkpoint story. Richard also mentioned the need to save the results and the possibility of running the code for a long time.

Troubleshooting Long-Duration Job on Cluster
Richard and Isaiah troubleshoot issues with running a long-duration job on their computing cluster. They successfully launch a 48-hour job on the research partition after encountering queuing problems with shorter durations on the interactive partition. They discuss the process of accessing the new session, sourcing the virtual environment, and continuing their work. Richard plans to let the job run and potentially analyze the data using the metrics CSV file. They agree to reconvene as a group on Monday or Tuesday to discuss further progress.

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