October 7th, 2023

To whom it may concern,

I'm writing this letter to assist you in understanding Shengjie XIA's performance in the Artificial Intelligence and Machine Learning – Introduction and Theory Online Research Seminar. I've included a program summary for your reference to provide you with an idea of what the student has accomplished in this program.

The program covered the most basic concepts in machine learning and data science. Specifically, students have learned about mathematical concepts (statistics, linear algebra, analysis), and fundamental machine learning algorithms (regression, classification, neural networks) and developed their own machine learning applications using common Python machine learning frameworks. The students also worked on homework that mostly consisted of programming tasks, where the students had to implement a wide range of machine learning algorithms like SVM, linear regression, logistic regression, decision trees, recurrent neural networks, and graphical user interfaces. A wide range of relevant methods in supervised and unsupervised learning has been covered in the class. The last lecture focused on modern machine learning applications with a focus on large language models, transforms and the attention mechanism, For the final project, students could either work individually or in groups to pick a generative method to implement a machine learning application with the topic of their own choice and present their work in the final week both orally and in a written report.

Overall, Shengjie XIA's performance in this program was excellent.

Shengjie was a very diligent student. He attended all classes with great initiative and a positive attitude. Also, he always listened attentively to the responses of others and remained an active learner throughout the program.

Shengjie completed his assignment with high quality, which was among the top of the class. He put meticulous thought into the assignments and handed in his homework on time. He was always able to think independently of tough questions and seek solutions by himself.

All students in this program needed to complete a final project with two portions, an oral presentation, and a written report. Shengjie was a valued member of Group 5, working on the Fruit 360 Classification project. Shengjie's primary responsibility centered on the project's methodology. In this capacity, he demonstrated exceptional organizational skills but also delivered a well-structured and remarkably fluent presentation. Shengjie's contributions extended beyond the presentation stage. He implemented multiple models, including MobileNet and AlexNet, delved into academic developments in Convolutional Neural Networks (CNN), optimized the data augmentation code crucial for model training, and even curated the validation set from the project's test folder.

I hope Shengjie XIA can pursue further study in this field. If there are any specific questions I can answer about Shengjie's performance in my program, please feel free to contact me.

Sincerely,

Mark Vogelsberger
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