**Reference Letter**

Dear Admissions Officer,

It is my pleasure to recommend Mr. Liu Shuo to your program. As one of the best students with the highest score of 99 in the exam of my Principles of Artificial Neural Networks course and the runner-up in my Practice of Artificial Neural Networks course, he struck me as an industrious, smart, enthusiastic, and rigorous young man.

He first caught my eye by his active study attitude and intense self-learning enthusiasm. To my knowledge, he kept the habit of previewing the new to identify the difficulties and key points in advance. After class, he proactively consulted me about the questions he encountered during class and his self-learning. I still remember he is one of the distinctive students who had completed additional tasks to attach the Non-Maximum Suppression approach to Single Shot Multi-Box Detector in the section of Object Detection. Despite the strict course requirements for knowledge absorption and extracurricular exploration, Mr. Liu’s passion never fade due to the challenges.

In addition to his initiative, I also appreciate his academic preciseness and sensitivity to details. As a keen thinker and observer, he was inclined to contemplate the sufficiency and necessity of propositions, considering their conditions while noticing the exceptions. Having completed the coursework, he tried different approaches to train Convolutional Neural Networks to find out their applicable situations. Besides, he detected and pinpointed the defects in the PPTs many times. All of these showed me his patience, circumspection, as well as rigorous scholarship for this subject.

All of the aforementioned characteristics inspire his great potential, as proved by his strong implementation and academic research capabilities in my courses. In the final project, he implemented an enhanced cycle-GAN in PyTorch with a novel auxiliary input for the generator. In addition, he led a team in a Kaggle competition about aerial cactus identification, where they came out on top. Furthermore, well-structured scientific reports on his work are always submitted periodically, demonstrating he is a reliable researcher. So to speak, he builds up excellence with benign habits instead of just relying on the instinctive talent.

In closing, I regard Mr. Liu as a qualified candidate with great potential for development and will become a valuable asset to your university the way he has been to mine. Thus, I recommend him without reservation.

Truly yours,

Ruixuan Wang

Associate Professor

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