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To Whom it may concern,

Mr. Qiang Li did an exchange year at ETH Zurich, D-BIOL IMSB Group, in 2019. With the IDEA League Research Grant scholarship, he completed his master thesis entitled Cell Morphology Based Diagnosis of Cancer using Convolutional Neural Networks under my supervision. The objectives of his thesis were to propose a unifying approach capable differentiating pathological from healthy cells in a data-driven approach (machine learning).

Mr. Qiang Li is a creative student and willing to try new research ideas. As part of his work on the master thesis, he set up the environment needed for deep learning within the ETH High Performance Leonhard Cluster. He learned on his own about the background of the pathology studied and verified the initial research idea of a YOLO-based cell segmentation. Furthermore, he applied deep learning concepts such as residual learning and linear operations from cheap transformation from GhostNet to achieve better classification results. He was exposed to both the theoretical and practical sides of the Machine learning approaches, especially Base Detection and Segmentation. He got an understanding of the effect of different architectural designs and hyper-parameters in tuning a model. Besides, he compiled a dataset of COVID-19 CT/Xray images to which he applied the methods and developed a well functional software prototype. With practical experiences in Python and various programming frameworks, he can deliver quality implementations for research and engineering projects. He further continued with an internship focused on multi-model learning and GPT-3 model applications following this training.

Based on his work at ETH Zurich, I high recommend Mr. Qiang Li for work or Ph.D. studies on projects related to applications of Deep Learning methods. I am at your disposal for providing more details.

Yours sincerely,

Dr. Corin Otesteanu