Dear Admission Committee,

I am Junchi Yan, a professor at the Computer Science Department at Shanghai Jiao Tong University. As Jinpei Guo's research advisor, I am honored to give my strongest recommendation on his behalf as a candidate for your program. I have known Jinpei as his research advisor for two years. Jinpei is one of the most exceptional undergraduates with his insightful thinking, leadership skills and strong research ability, reminding me of who I have mentored and been admitted to computer science department at top universities like CMU and MIT. I believe your graduate program will provide Jinpei with more opportunities to expand his vision and fulfill his potential in a diverse community.

Two years ago, Jinpei approached me regarding the opportunity of being his research advisor. He was passionate and highly curious when exploring my topic regarding Combinatorial Optimization (CO). In his first project, he led a team to develop network-based frameworks for Graph Matching (GM), which aimed at finding point pairs on the given images. He exhibited innovative and insightful thinking and proposed to develop a GM-specific backbone based on vision transformers. His working efficiency was impressive and he completed the programming of the proposed framework and the main experiments in just three weeks. His methodology successfully achieved state-of-the-art performance and he submitted the paper to IEEE International Conference on Acoustics, Speech and Signal Processing as the first author.

Because of his outstanding performance, I invited him to join another research project which aimed at injecting guidance to diffusion models for CO problems. His strong programming skill and solid mathematical foundation left a deep impression on me. He independently completed the mathematical derivation and proposed an insightful methodology to seamlessly incorporate guidance into the diffusion model to alleviate local minima in the solution space. He implemented his idea in just two weeks and played a core role to carry forward the project. He applied his method to solve various CO problems, such as the Traveling Salesman Problem (TSP) and the Maximum Independent Set (MIS), and achieved remarkable results. As the second author, he published a paper at Thirty-seventh Conference on Neural Information Processing Systems (NeurIPS) and the work received a lot of praise from the community.

Jinpei also made contributions to other fields. He published a paper regarding logical reasoning at NeurIPS as the second author and submitted a paper regarding SAT solving at The Twelfth International Conference on Learning Representations (ICLR). Because of his distinguished academic performance, he received the National Scholarship twice and Shanghai Scholarship. He exhibited strong enthusiasm to pursue further study and help to push the boundaries of artificial intelligence.

In summary, I strongly recommend Jinpei Guo to your prestigious university. He is one of the most motivated and talented students compared with other undergraduate and graduate students whom I have taught or worked with in the past. Your favorable consideration of his admission to your program will-be highly appreciated. If further information is needed, please do not hesitate to contact me.

Sincerely,

Professor Junchi Yan