Teaching Philosophy: Teaching and mentoring has been one of the most rewarding and fulfilling aspects in my past research career. I am deeply passionate about extending this enriching experience into my future roles as a teacher and academic mentor. My goal of being a teacher is helping the students acquire the needed knowledge and skills to pursue any discipline or projects that they are passionate about in the future. To this end, I would love to help the students to develop communication skills, which I believe are crucial for successful collaboration in academic and professional settings. I would also love to help students to become independent and critical thinkers with the ability to identify and solve problems on their own. I believe that these skills are important for students to identify the problems that they are passionate about and learn how to solve their problems on their own. To put my teaching philosophy into practice, I will design courses that consist of not only the structured lectures to deliver fundamental knowledge, but also some open-ended group projects for students to learn how to solve problems collaboratively.

Teaching Experience: As a graduate student at Washington University in St. Louis (WashU), I served as a teaching assistant for the interdisciplinary course Human-in-the-Loop Computation (CSE 518A), led by Prof. Chien-Ju Ho. This course covers topics in machine learning, behavior (social) science, game theory and optimization. During my teaching assistantiship, I was responsible for preparing problem sets, leading recitation, grading assignments, and holding office hours. A pivotal moment for me was giving a seminar on fairness in machine learning in this course, during which students from diverse backgrounds and cultures contributed their unique perspectives on established fairness definitions in current literature. This experience was truly enlightening and informed my teaching approach, and also helped me realize the importance of the critical thinking. In addition, during my time at WashU, I also had the privilege to give a guest lecture in the course Introduction to Machine Learning (CSE 417T). These experiences have granted me invaluable insights into the pedagogical nuances of conveying complex technical topics and identifying areas where students may encounter difficulties. During my time at Columbia University as postdoc, I actively participated in the IEOR-DRO Seminar at Columbia, and joined a reading group on Algorithms with Predictions (organized by Prof. Will Ma and Prof. Eric Balkanski). During the reading group, I had the opportunity to give a lecture and provide constructive feedback on presentations delivered by other participants. As a result of the interest, I also built a collaboration for future research through these seminars. These engagements allowed me to strengthen my communication skills by interacting with researchers and students from a wide array of disciplines and enabled me to become a better teacher.

Teaching Interests: My interdisciplinary academic background, training, and research interests have uniquely positioned me to teach a wide range of courses across operations research, computer science and data science. At the undergraduate level, I am interested in teaching courses in artificial intelligence, machine learning, optimization, data structure and algorithms. At the graduate level, I am capable and well-suited to teach courses in advanced artificial intelligence, machine learning theory, online learning, economics and computation, and related topics. Moreover, my research experience in operations research and my industry collaboration with tech companies like Alibaba and Microsoft also equips me with the practical insights and skills to effectively teach core MBA courses, including Operations Management and Revenue Management that involve subjects such as decision-making with uncertainty; AI-driven business strategies; machine learning for business.

I am particularly excited about the opportunity of developing advanced courses that align with my research experience and areas of interest. One such course I envision is **Modern Design of Online Marketplaces**, inspired by the increasing integration of cutting-edge AI and machine learning technologies into marketplace design. In this course, I will cover the topics like online recommendation, information design, data-driven approaches to pricing and advertising. In addition, I am enthusiastic about designing seminar-style courses focused on special topics such as **AI and ML for Management**, **Online Decision-making in Operations**. These seminars would explore research areas

like online learning algorithms, market design aided by machine-learned predictions/advice, and the economics of information. I will also invite guest speakers who are renowned experts in these fields to my classes to introduce their most recent research, which can also provide invaluable networking opportunities for students.

Mentoring Experience: I have been fortunate to have great advisors throughout my education. They have shaped the way I think and helped me grow into me. One privilege I feel most excited about being a faculty is advising and mentoring students, where I can pass on my enthusiasm for research to my students as my advisors did to me. I have already had the privilege of advising two junior Ph.D. students at WashU, with one paper accepted in AIES 2022,another one under submission. I have also help supervised one undergraduate research project at University of Chicago, and advised a junior Ph.D. student outside of my institutions such as University of California, Santa Cruz (paper under submission). In addition to academic guidance, I have actively assisted students with their graduate school and internship applications, providing individualized feedback and also reviewing grant proposals.

My mentoring experiences have made me realize that almost all students are very eager to learn but they are also different with their interests. For undergraduate students, my goal is to help them discover their unique interests and the skill sets they will need to excel in those areas, whether in academia or industry. When it comes to Ph.D. students, my philosophy focuses on helping them to become independent researchers capable of identifying significant research questions and possessing the necessary tools to address these questions comprehensively. To this end, I view my role as a mentor to be multifaceted: providing not only technical guidance but also helping them developing the soft skills crucial for becoming an independent researcher. I believe that the mentoring process is mutually enriching. While I guide students in their research journey, their fresh perspectives can often inspire me new research avenues that I had not initially considered.