Jongse Park   Teaching Statement

Incredible teachers, advisers, and mentors have helped me overcome numerous challenges throughout my education path. Fortunately, I have had opportunities to experience the joy of teaching during my graduate career by serving as a teaching assistant and mentoring undergraduate/graduate students. In this statement, I describe my teaching style and teaching experience, and list the courses that I feel qualified to teach.

Teaching Style

As a teacher and mentor, I strive to foster four main skills in the students: (1) the ability to apply critical thinking to problem solving, (2) the ability to communicate at the correct level of abstraction, (3) the ability to think about the big picture and the details concurrently, and (4) the ability to learn on their own and find new challenging problems. I believe in learning by doing, and I think that interactive teaching stimulates a greater sense of learning in the students. Thus, I plan to develop courses with a significant project component, require in class presentations, and encourage questions during the lectures. I think exhibiting enthusiasm and incorporating humor while teaching helps keep the students interested. It is also important to explain the fundamentals to everyone, while simultaneously providing an intellectual challenge to as many students as possible. To further nurture intellectual abilities in the students, I will give optional assignments and encourage the students to go the extra mile. I will also ask the students to submit critical questions and arguments about the course material before lectures. Finally, I believe that being reflective about one's own teaching and paying attention to student feedback is crucial to improving the teaching experience.

Teaching Experience

Since my master studies, I have had the opportunity to get involved in teaching and mentoring students. In the first and second years of my master studies at KAIST, I served as a teaching assistant for Embedded Computer Systems (CS311) and Digital System and Lab (CS211) courses, offered for undergraduate CS majors. My primary role was to help students develop various hardware logics and processors using hardware description languages. Furthermore, teaching assistants were required to write and grade the assignments, and grade the exams. Interacting with students and helping their learning was a thrilling experience that further inspired me to pursue a doctoral degree and aim for an academic career as faculty. During my PhD studies in Georgia Institute of Technology, I have been the head TA in undergraduate and graduate courses, Processor Design (CS3220) and Alternative Computing Technologies (CS8803), respectively. For two semesters, I was the head TA for CS3220, who is responsible for leading the group of TAs to write and grade projects, assignments, quizzes, and exams. Due to the significant implementation difficulty of the projects, many students struggled to deliver the project results on the deadlines; however, as the head TA, I led all TAs to offer aggressive and responsive help so that no students dropped behind. This experience was doubly rewarding because my teaching efforts not only led the undergraduate students to succeed in their coursework, but also enabled the rewarding experience of teaching to my colleagues. Another course that I served as the head TA was CS8803, a graduate-level seminar course where my role was to lead the in-class discussions and grade the students' critiques of discussed literatures. In addition, I delivered a few guest lectures for my advisor's courses in both Georgia Institute of Technology and University of California, San Diego. I found the lectures to be particularly rewarding since the lecture topics, contents, and formats were all on me and I could successfully deliver what I planned to teach in the sessions, while maintaining their interest.

Mentoring Experience

Since I am my advisor's first PhD student, I have had abundant opportunities to mentor junior PhD students and master students who took special problems with my advisor. While mentoring the students, the core strategy to keep them largely engaged on the projects was to avoid guidelessly assigning tasks without informing them the impact of the work. I believe that this approach, while simple, made them self-motivated and gave them the feeling of ownership, which is the key for successful research projects. One of the mentored master students, Hardik Sharma, decided to pursue PhD with my advisor and became my best colleague. We have worked on various projects together and led some of them to successful publications on the top venues in computer architecture.

Teaching Interests

I am eager to teach courses on computer organization, architecture, microarchitecture, and hardware design at all levels. I am also interested in teaching seminar courses on special topics in computer architecture. Moreover, I would like to help develop and teach a course on system architecture design for machine learning at the graduate level, which provides a deeper understanding of the machine learning algorithms with emphasis on their applications and implications on architecture and system design. I would also enjoy teaching introductory courses on operating system, distributed system, system programming, compiler, and programming languages.