Teaching statement

Kyungmin Lee

I have enjoyed every teaching opportunity I have received. It excites me that as a professor, I will continue to have opportunities to engage with students.

Teaching experience: My teaching experience comes from multiple classes in which I served as a teaching assistant while an undergraduate and a graduate student at Duke University and the University of Michigan.

At Duke University, I was a teaching assistant for six semesters. I held weekly office hours to help students with class assignments and class materials for two very different courses: Introductory Programming Design and Analysis, and Operating Systems. I enjoyed being a teaching assistant for the introductory programming class because it gave me an opportunity to help students understand core programming concepts such as data structures and pointers. By engaging with students with limited programming experience, I learned to use real-life examples to explain programming concepts. For instance, I used the analogy of lock boxes in the train station to teach the concept of pointer, where a lock box can contain an object or a key that opens another lock box.

At the University of Michigan, I was given an opportunity to run my own discussion sections for the User Interface Development class. In my discussion sections, I noticed that students who started an assignment without a good understanding of the assignment and the course material often found themselves lost or did lots of unnecessary work. To avoid this problem, I went over each assignment’s specifications thoroughly during my discussion sections and ensured students understood what they were asked to do. I also explained the core concept they needed to understand to finish the assignment successfully. Once students understood the core concept of a material and a project, it made the assignment much more enjoyable and achievable for them. I plan to incorporate into my future classes all of the valuable lessons I learned as a teaching assistant.

Courses I can teach: As a new faculty member, I would be excited to teach undergraduate courses on introductory computer science, operating systems, and distributed systems. In particular, I have a strong interest in teaching an introductory class designed for non-engineering background students. I was originally an economics major and was introduced to the field of computer science through an introductory programming class. I hope to have similar results with other non-engineering students.

Additionally, I want to create a seminar course involving mobile application development for a connected vehicle environment. In this pervasive computing world, it is important for students to have hands-on experience with understanding the unique constraints of a vehicular environment and developing beneficial applications accordingly. Since I have expertise in this area, I would be excited to teach this seminar course.

Teaching and mentoring philosophy: Creating an enjoyable learning experience is the top priority of my teaching philosophy. Students learn much more when class projects and materials interest them. Students especially enjoy projects that involve multimedia, since they can visually verify whether the application is working properly. To ensure students enjoy the learning experience, I plan to create many assignments that involve multimedia. For instance, I plan to create a programming assignment for students to build a small multi-threaded video streaming application. This would teach the concept of multi-threading and synchronization.

Being available to students is also very important in creating an enjoyable learning experience. I plan to hold multiple office hours and be active in an online class discussion forum to ensure students can receive help as needed.

As an advisor, I plan to encourage the independence of students and allow them to learn lessons as they tackle difficult challenges on their own. While promoting independence, I plan to meet with students often to ensure they are headed in the right direction. I plan to tailor my advisement style to match each student’s personality. Similar to my teaching philosophy, I want to create an enjoyable research experience. I hope to achieve that by encouraging students to pursue problems that interest them the most.