Teaching Statement

Dongfang Zhao (dzhao8@iit.edu)

http://datasys.cs.iit.edu/~dongfang

Teaching is not only a profession but also an art—the art that passes the knowledge we accumulate in our generation to our offspring in a fun (intuitive) and fast (efficient) manner. For computer science undergraduates, I expect students to promptly (in 3-5 years) acquire sufficient basic- to medium-level skills for (1) their engineering positions in industry, or (2) preparation for research study at graduate schools. For computer science graduate students, the goal is to train them for, interdependently and collaboratively, conducting cutting-edge research. In both cases, it is the teaching that helps students achieve their career goals. In a more general sense, I strongly believe in the value of education not only in computer science but in the entire society.

During my Ph.D. study, I had the privilege of being the teaching assistant (TA) for one undergraduate class (CS495: Introduction to Distributed Systems) and two graduate classes (CS553: Cloud Computing, CS554: Data Intensive Computing, twice for each). They cover a wide spectrum of different class characteristics: CS495 is a small class with 15 undergraduates (conventional form: quiz, homework, exam), CS553 is a large class with 170 graduates (mostly master students; projects-emphasized), and CS554 is a medium class with 30 graduate students (mostly PhD students; research-oriented). Because the instructor of all these classes was my research advisor, I was fortunate to have the valuable experience of participating in designing the curriculum, guiding student project's progress, and delivering some guest lectures in addition to the regular TA duties such as grading papers and holding office hours. It was enjoyable to interact with students in these different environments; As a case in point, one of my students (a first-year master student) presented his term project at a top venue under my guidance.

According to my research and teaching experience, I wish to teach the following classes: distributed systems, operating systems, parallel computing, cloud computing, and machine learning. Nevertheless, I am passionate in teaching thus I would like to teach other subjects such as computer organization, computer architecture, database systems, data mining, computer vision, programming languages, algorithm design and analysis, and so forth. If possible, I am willing to design the curriculum of new classes that are not currently offered by the department.

Computer science education has to be more than textbooks, assignments, and exams; It is equally, if not more, important to let students understand how the skills to be applied in the real world. For undergraduates, I plan to share my industrial experience of software development with case studies and invite my industrial collaborators to the campus to give guest lectures. For graduate students, I will encourage them to work with my collaborators in government labs (such as Argonne National lab, Lawrence Berkeley National Lab, Pacific Northwest National Lab) and industrial research labs (such as Google, IBM, Microsoft).