

# Teaching Statement

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Teaching, in my view, has two important aspects: 1) imparting basic knowledge about a subject, and 2) training students to apply the techniques that they learned on new problems. It is often the case that students simply regurgitate the knowledge that they learned without having the ability to apply any of those knowledge to solving problems. I would strive to improve students' problem-solving skills. To that end, I would use the teaching style where lectures convey high level ideas while assignments and projects apply these ideas to actual problems.

My teaching experience is from four teaching assistantships: two semesters at M.I.T. and two quarters at Stanford. At M.I.T., I TA'd the introductory computer architecture course (6.004). The course also has a lab component that involves implementing a simplified DEC Alpha chip, dubbed the Beta, on FPGAs; and the main tasks for TAs are to guide students through this design and implementation lab. I also gave occasional recitations and review sessions. One important aspect of teaching that I learned from this experience is that students learn materials in different ways. When explaining a concept, I often had to devise two or three different approaches so that all the students can grasp the concept. Although presenting the same idea in multiple ways is tedious, it does significantly improve students' understanding and re-enforce their learning. As a faculty, I intend to continue with this style.

At Stanford, I TA'd an introductory database course (CS145) and a mid-level database course (CS245). The former course focuses on understanding and using database technologies; the latter course focuses on high-level details of how to implement a database system. When TA'ing the introductory course CS145, I was in charge of the project component where students actually used Oracle as a back-end to build an online auction site. I assisted in streamlining the project and devised some automated mechanisms for testing and grading. While TA'ing the mid-level course CS245, I was actively involved in setting up assignments and exam questions. I learned how to design questions such that they test and enforce students' knowledge without being excessively tedious. In both CS145 and CS245, I had the opportunity to teach a lecture. Teaching in front of a large crowd was exciting. I enjoyed the experience.

As a faculty, I am keenly interested in teaching seminars related to Peer-to-Peer and distributed systems. In these seminars, I would provide basic background materials for students interested in the area; I would also survey state-of-the-art research and identify new problem areas so that students can dive into the heart of the matter. With my background, I believe I am also qualified to teach courses in operating systems and distributed systems. In addition, I believe that I am capable of teaching architecture and database courses. Besides those, with some preparation, I can also teach introductory graphics and theory courses. Because of my diverse interests and my ability to teach many different type of courses, I think I can make significant contributions to the department.

Overall, I am looking forward to the opportunities of conveying to students my knowledge in the areas of my expertise. I am also excited about the prospect of shaping the minds of the next generation researchers through my teaching.