

Teaching Statement

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Positive teaching experiences over the years have reinforced my decision to pursue an academic career instead of seeking a purely research position. In my view, the main objectives of teaching are 1) the acquisition of knowledge, and 2) the development of intellectual skills, helping the students become inquisitive, critical thinkers with strong problem solving abilities. With this in mind, I believe that a combination of structured lectures together with homework assignments to reinforce skills, and interesting larger projects that help students place their learned skills into a broader context is extremely effective.

I have also found that teaching is not simply a one-way transfer of information. Teaching is often an effective way for the teacher to learn. The act of organizing the material for presentation and the questions asked by students increase my own understanding of the concepts I am trying to teach. The skills learned through teaching also help my research, as it makes me think of how to clearly and carefully present my own work.

Teaching Experience

I have always enjoyed teaching. Even at a young age I participated in “Teacher for the Day” programs at my elementary school where I lead classes through various math problems. Throughout high school and as an undergraduate I taught swimming and skiing and coached a local ski team. I also tutored people in calculus and linear algebra and served as a teaching assistant for courses in real analysis and calculus.

As a graduate student I have been a teaching assistant for AI courses, both at the undergraduate and graduate level. My duties have included grading assignments and exams, generating exam questions, and running weekly help sessions. The most rewarding experience has come from organizing checkers competitions. Students were required to write programs that played checkers, and then enter their programs into a tournament where they competed against each other. The three times I ran this project it generated a lot of enthusiasm among the students, with many going above and beyond the project requirements, independently researching different topics in AI to get ideas to try out in their programs. It showed me the power of enthusiasm when it comes to teaching and learning.

Future Teaching

I would love to have the opportunity to create courses that cover areas in the intersection of artificial intelligence, game theory, and algorithms. The courses would include such topics as electronic market design, algorithmic mechanism design, network games, and automated negotiation. Additionally, at a graduate level I would like to teach more general courses in AI and multiagent systems.

At the undergraduate level I am quite flexible in what I can teach, in particular several areas in AI, as well as certain other areas of computer science, such as algorithms and data structures and finite mathematics. Finally, I am looking forward to working with and mentoring students as an advisor. I plan to emphasize communication skills and critical thinking, and hope to pass on my enthusiasm for research and teaching.