Teaching Statement

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April 28, 2015

A major reason for seeking a position in academia after three years in industry is teaching. I enjoy teaching, and believe it is as important as excellence in research to progress our field. I found communicating ideas to students by teaching courses, as well as to practitioners by leading seminars and workshops, to be a rewarding experience that I am looking forward to continue.

My most recent teaching experience included serving as the lead teaching assistant for two core undergraduate courses at the University of Minnesota: "introduction to algorithms and data structures" and "discrete structures of computer science". I was also a guest lecturer for a graduate course on advanced topics in security and privacy. For both courses, I was responsible for recitation sessions, thus interacted weekly with students. I helped designing programming assignments, problem sets, and exams. I further participated in grading, and held office hours. As a graduate student at Minnesota, I also experienced supervising the research work of two students, where that was instrumental in shaping my interest in pursuing a position that combines research with teaching. In the past three years, I (co-)mentored the work of seven doctoral students in Verisign's interns program, with great success. I also led various introductory courses, seminars, and technical talks on network security that were well received.

My teaching philosophy is summarized in an old saying: "Tell me and I forget. Teach me and I remember. Involve me and I learn". The main characteristic of my teaching style is an active learning class, where students are brought to the threshold of their capabilities. I believe teachers should not provide answers to all questions, but drive students to their real potential by teaching them the necessary tools and skills to be independent thinkers. To achieve this goal, engaging students in the learning process is essential; many computer science courses are abstract, and engaging students would greatly improve their experience. Furthermore, establishing a fair and clear grading policy that encourages students to go beyond taught contents, setting clear and realistic goals to achieve, and identifying and fixing misconceptions at early stages in the learning process–where the grading policy should allow students to learn from their mistakes, are all pivotal. Finally, I believe that teachers should be accessible to students, thus fulfilling the intended message of teaching.

I practiced this philosophy at the University of Minnesota, which proved to be effective. Students expressed their experience in my evaluation, summing up some of my teaching characteristics, where some comments by them included: "Aziz was always helpful in discussion sections. He explained problems in a very clear manner without giving away the answer", "He provoked interest in the otherwise dry material, explained concepts well, and made an enjoyable atmosphere", "Very friendly and interactive", "He made me think through questions I had without just giving me the answer", "Easily talkable to ask questions", "Went well beyond his duty as instructor to help my learning. He spent extra time to help me and encouraged me to learn", "He spent the time to listen to my way of thinking and help improve parts that were lacking and bolster aspects that were already satisfactory", and "He is a great person and a great TA. It was a joy to learn from him".

As a faculty member, I would be qualified to teach courses on security and privacy, cryptography, discrete mathematical structures, algorithms, and introductory computer science. I am also capable of teaching introductory courses in operating systems and networking. A particular course I want to develop in the future would benefit from my current work on security analytics.