Teaching is an important activity in academia. Although the major component involves transferring knowledge, I see teaching as an opportunity for both the teacher and the students to collectively learn and improve each others' understanding of a subject. My strongest motivation for teaching is this opportunity to interact and engage in this collective learning experience with young and bright students who are on the stepping stone of their careers.

Teaching Experience

During my graduate studies at NCSU, I worked as a project coordinator for two courses — *service oriented computing* and *social computing*, three times each. As the project coordinator for these courses, my key responsibilities included (1) preparing problem statements for the course projects, (2) setting up the programming environment for students to debug their projects, and (3) assisting students to understand the project definitions and debug their code base. As the project coordinator, I also assisted teaching assistants of the courses in developing course assignments which were precursor to the larger course projects. I prepared problem statements for the course projects such that they (1) reinforce concepts taught in the course lectures, and (2) train students on state-of-the-art technologies. Although this was time consuming, it was heartening for me to learn from several students that their course projects played an important role in fetching them industry positions after graduation.

I also enjoy helping and mentoring students. At NCSU, I helped advise two master thesis. I formally and informally mentored one high school student, one undergraduate student, and six junior graduate students.

Teaching Interests

I would like to align my teaching and research interests, where possible. In this way, I can both teach state-of-the-art techniques and actively engage interested students in research. Broadly, I am interested in teaching course modules related to cybersecurity, artificial intelligence, and software engineering.

At a foundational level, I am interested in teaching modules related to artificial intelligence and software engineering to the students enrolled in the Computer Science BSc course. At an advanced level, I am interested in teaching "Security Testing", "Security Management", "Computer Forensics and Cybercrime" modules to the students enrolled in the Cybersecurity MSc course. Apart from these modules, I am both interested in and qualified in teaching several other modules including "Artificial Intelligence Reasoning and Decision Making", "Machine Learning", "Software Measurement and Testing", and "Formal Verification". I can teach these foundational and advanced level modules in their current form or adapt them according to the objectives of the Department of Informatics at King's College. I am also interested in introducing a new module on "privacy" in the Cybersecurity MSc course.

Owing to my experience in industry research and working as a course project coordinator, I am also willing to guide students in their individual projects at both BSc and MSc level.

Teaching Methods

First, I will incorporate a cognitive approach in my teaching. Understanding the importance of the "why" question before one can answer "what" and "how", I will focus first on understanding the problem and then on solution.

Second, balancing theory and practice is an important aspect of teaching computer science. I will design my lecturers to educate students on the concepts as well as to train them on using those concepts. This will both develop students' intellect and equip them with the skills their careers demand. Learning from my project coordinator experience, I will make sure that the assignments reinforce the material I teach in my lectures.

Third, higher-education institutes are culturally diverse. Diversity enhances students' experience, but could make teaching a challenging task. I understand that students from certain countries tend to be outspoken, whereas from others tend to be shy. Inside the classroom, I will encourage students to first talk to their peers and then to the instructor. Outside, I will encourage group assignments. I have been fortunate to have collaborated with people across diverse groups including from different age groups, gender, and cultural and educational backgrounds. I respect differences and appreciate diversity. I will do my best to accommodate for them in my teaching.

Fourth, I imagine that a student does well in a course not just because of dedication, but also because of being passionate. In foundational modules, for students seeking industry jobs, I will demonstrate how concepts they learn can lead to applications which benefit society. In advanced modules, I will invite researchers to present state-of-the-art research relevant to the course modules to motivate students in a research career.