TEACHING STATEMENT

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I have found my interactions with undergraduate and graduate students to be one of the most inspiring and engaging aspects of graduate school and my post-doctoral career. As a teacher I believe that my role is to equip students with skills to solve real-world problems and that it is important to design content with this in mind. I think it is important to be aware that students may be at different intellectual stages and will not all learn in the same way. Therefore, I am a strong advocate of "learning by doing" approaches supplementing classes and lectures. In my experience students engaged in active enquiry are able to internalize concepts quickly. While fundamentals can be effectively covered in classes and through homework assignments I think that practical class projects serve to encourage students to think creatively about the topics at hand. Appropriate forms of evaluating student progress are required with such an approach. For instance, exams, reports and presentations need to be designed to capture a student's problem-solving ability and creative thinking. I am excited about engaging with undergraduate and graduate students and to develop and tailor teaching content to their needs.

Classes and Supervising

At MIT I was teaching assistant in the *Pattern Recognition and Analysis* class (MAS.622J / 1.126J). During this class I was able to help the students learn fundamental concepts in machine learning and develop novel projects that applied techniques that they had learnt. I am currently a technical mentor in the *Engineering Health: Understanding & Designing Affordable Health Diagnostics* (MAS.S61) class at MIT. In this role I have been supervising a team of graduate students working on an affordable health project. We are also engaging with clinical mentors in a cross-disciplinary collaboration. I have given guest lectures in several courses at MIT covering a range of theoretical approaches and applications: *Pattern Recognition and Analysis* (MAS.622J / 1.126J) - Gaussian Process Models, *Camera Culture* (MAS.132) - Remote Physiological Sensing and Computer Vision "In-the-Wild", *Intelligent Multimodal Interfaces* (6.835) - Emotion and Physiological Sensing (I also provided feedback on final project ideas to undergraduate and graduate students.), *Affective Computing* (MAS.630) - Facial Expressions Analysis: techniques and applications, *Media Arts and Sciences Fundamentals* (MAS.500) - Computer Vision Approaches.

During my Ph.D. I supervised a number of undergraduate students through MIT's Undergraduate Research Opportunity (UROP) program. One of my students carried the research into their undergrad thesis project during which I continued to advise them and provide feedback. Through these experiences I have recognized that some students thrive when given an open-ended research question to pursue, whereas others benefit greatly from more structured guidance. I believe it is my role as a mentor to adapt to students' needs. As Director of Research at Affectiva I am supervising two computer/data scientists in addition to three high school and undergraduate interns. In a number of these cases the students and researchers that I have been mentoring have had their findings published in peer-reviewed journals and conference proceedings. I have had experience of teaching outside the university context. In 2007 I spent three months teaching English classes to middle and high school students in China (Jinan and Shenzhen) and have run youth programs in Romania, Cuba, US and UK. These experiences taught me the importance of clear instructions and simple metaphors in teaching.

Future Plans

I would be able to teach foundational and advanced courses in a number of areas of computer science, including Human-Computer Interaction and Affective Computing. In particular, I believe that computer vision and physiological sensing have many compelling applications and allow one to teach fundamental concepts (including principles of signal processing, image analysis, machine learning). I am excited about bringing the latest examples of these applications to undergraduates and graduate students. I plan to teach classes that cover fundamental concepts and allow students to design and implement applications. I believe that the type of courses I could offer would also be attractive to students outside of the School of Computer Science.