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TEACHING STATEMENT

Engaging students and stimulating their interests and critical thinking is a very rewarding and fulfilling process. I also view teaching as an important component of an academic career: combined with research, it creates a fruitful synergy, as it provides an opportunity to articulate ideas and welcome new perspectives.

TEACHING PHILOSOPHY

I believe students learn best when they are engaged and active in the classroom. To that end, I aim to promote a learning environment that is conducive to student participation. I emphasize how theoretical concepts map into real-world applications and anchor them to well-understood examples that students can relate to. Strong, long-lasting knowledge and deep understanding can be fostered by putting concepts into practice. As such, computer science provides a unique opportunity to implement those concepts.

Importantly, I think that one of the most valuable accomplishments in teaching is to provide insights on general problem-solving strategies and how they apply beyond the context of a specific problem, rather than simply presenting problems and their solutions. Stimulating independent thinking, guiding students with thought-provoking questions, encouraging them to find the solutions by themselves makes a more rewarding learning experience.

A successful constructive approach that I have been using with students from middle school up to undergraduate programs is to provide them not only with the tools they need to solve a problem, but also with the confidence that this problem is within their reach. Over the years, I noticed that confidence significantly improves a student's solving skills, as it encourages them to try out, which in turns helps organize ideas and inspires creativity. Also, the difficulty level of the material and problems should be challenging but commensurate with students' expertise and knowledge. Finding a good balance in the level of difficulty is key in promoting students' confidence and success. Structured learning is about building up knowledge, one block at a time.

TEACHING EXPERIENCE

I have always enjoyed teaching and have had the opportunity to do so through various settings and experiences: from mentoring middle-school students to leading lab sections for undergraduate

students and giving guest lectures in a graduate course.

I have learned to adjust to diverse students' backgrounds and skill levels. As a teaching assistant in *Probability and Statistics*, I lectured discussion sections to business students, including MBA students. This diversity brings interesting discussions to the classroom dynamics. I have also had the chance to interact with students from all over the world. Students with different socio-economic and cultural backgrounds are a wonderful addition to the classroom. They often provide a valuable alternative perspective and tackle problems from a different angle, which I found helps many students. I believe I have a strong ability to relate to a diverse body of students and make the most of the inherent challenges associated with diversity.

From leading lab sessions in *C++ programming* and *Computer Architecture*, I have learned how to efficiently support students in their learning process by anticipating potential errors and misunderstanding. Also, I have participated in seminars on how to improve presentation skills and how to be most effective in the classroom, in particular with information technologies in modern education.

At Cornell, I have been the lead TA for the undergraduate course *Foundations in Artificial Intelligence*. I helped organize the class, gave recitation sessions, held office hours and wrote exam questions. In the *Practicum in AI*, I helped steer and advise course projects. I received an award of excellence for best TA at the CS department level. In the *Topics of Computational Sustainability* graduate course, I gave guest lectures as well I advised students through their course projects. I have also been mentoring an undergraduate student.

I find student advising to be a very fulfilling experience and I am committed to devoting time and energy to students to help them reach their academic goals and achieve their full potential.

TEACHING INTERESTS

The extensive and rigorous training I received during my graduate studies in Computer Engineering and doctorate studies in Computer Science, along with my experience, makes me qualified and comfortable to teach a broad range of classes at the undergraduate level. In particular, I am very excited to teach undergraduate courses in my main areas of expertise: Artificial Intelligence, Analysis of Algorithms, Machine Learning, Probability and Statistics for Computer Science, Data Structures, Discrete Mathematics for Computer Science.

I am also very interested in teaching courses at the graduate level, such as: Advanced Artificial Intelligence, Optimization and Heuristic Methods, Human Computation, Integer Programming, Probabilistic Graphical Models.

In addition, if the opportunity presents itself, I would be very interested in developing and teaching a course on Computational Sustainability. This interdisciplinary, research-oriented, project-based course would be a great opportunity to present pressing issues in sustainability and introduce a broad range of computational methods, from combinatorial optimization to machine learning and dynamic models.