

## Statement of Teaching

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My teaching philosophy is influenced by my personal college experience. When I was an undergraduate student, I had a small group of friends who always studied together. Because I was good at explaining difficult concepts, my friends turned to me to tutor them. One of my friends said he believed he would have made an A in every class if I always tutored him far in advance before the exams. Over time, I developed the habit of studying early, so I could help my friends study for exams. So, I started role playing as a professor while I was in college.

I enjoy tutoring my friends so much that I created a study guide with notes for them for every exam. During the experience of creating study guides with notes, I developed the ability to synthesize textbook information into a format that better fit my friends' learning schemes. I re-organized the concepts in my own way—just the way my friends would understand the concepts. Therefore, the new organization became easy for them to remember and find the information quickly at a glance. In my teaching today, the first approach I take is that I apply the “study guide with notes” approach to re-organize textbook content into a format easy for my students to understand. And I allow my students to bring their own study guides with notes to exams.

Similarly, I enjoy designing new courses. I joined King Mongkut's Institute of Technology Ladkrabang/KMITL in Thailand in 2016 at a time when the Department of Computer Science started to grow in the area of data science. I designed 3 new courses for the department, and the courses are “Big Data Analysis,” “Spatial Databases and GIS Applications,” and “Web Mining”. For one particular course, “Big Data Analysis,” there was no textbook on the market when I taught it the first time. Due to that reason, I compiled the best materials from different sources and created my own course book, customized to the needs of the department and students in the program. This course has been a success, and it is being offered since Spring 2017. I plan to bring the same level of enthusiasm and initiative to every new course I develop in the future, in continuous progress to keep up with the field.

Second, I also have industry work and consulting/training experiences, including with online startup companies (e.g., Zortout.com, an online stocking management site), financial banks (e.g., Krungsri Bank, Siam Commercial Bank, and Kiatnakin Phatra Bank), federal agencies (Thai equivalents of NASA and FDA in the US), international agencies (e.g., International Labour Organization, a branch of the United Nations based in Bangkok). I often bring applied examples into my teaching. Given my consulting experience in the industries, I bring real-world examples into my teaching. Whenever I teach a new concept from the textbook, I add to it with how the concept is applied in the various industries I have worked with. I often provide examples from my own consulting projects (with confidential information removed, of course) to help students understand a new concept. Because many students think about how their education can help them in their future careers, this approach is often appreciated by my students.

Third, I spend time allowing students to work on problems with me in the classroom. Although class time is limited, I find that students usually learn a lot more from my class when I spend some time on a weekly basis to allow students to work through difficult problems in the classroom. I can immediately notice where they misunderstand the concept, and I am able to correct the misunderstanding quickly, and have the students also teach each other. Because I remove misunderstanding of difficult concepts in the classrooms, students do not have to struggle with difficult concepts when they study at home. Also, this approach allows me to receive instant feedback, so I can modify the class the next day instead of reading the suggestions in my end-of-the-semester teaching evaluations.

In order to incorporate both undergraduate and graduate students into my research program, I first get them interested in ‘research’ by using my own projects’ examples to illustrate course content. Once they see how research being carried out on campus is related to their major and the classes they take, they will join my lab. Once they are in my lab, I give them tasks appropriate to their under/graduate knowledge levels, but still motivate them by explaining that their work is contributing to the body of knowledge in the global research community. Once the research is published, they recognize how the papers look just like the other research papers they have read in the class. This often gives them a sense of pride in their student research with me.

Teaching is involving students with different perspectives in sharing, engaging, and discovering new and creative ideas both inside and outside of the classrooms. I strive to organize current content in a way easily understood by my students, supplement it with industry examples and problems students can work through in class, and I involve my students in my research. Teaching is one of my passions (along with research); I feel extremely satisfied when students express their appreciation when the light bulb goes off, and I enjoy satisfaction when I am able to share my knowledge and experience with my students, seeing how my efforts translate to their learning, as well as moving the research community forward by inspiring the next generation of computational social scientists, computer scientists, practitioners, and technologists.

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