

TEACHING EXPERIENCE

At Carnegie Mellon University, I have been a co-instructor of two courses: User-Centered Research & Evaluation (UCRE, Fall 2019, 84 students in total, 17 students in my section) and Programming Usable Interfaces (PUI, Fall 2020, 91 students in total, 14 students in my section). For both courses, I was responsible for teaching the weekly 2-hour recitation sessions, including both undergraduate and master students. I also hosted weekly office hours, helped students design projects, answered final exam questions, and graded assignments and exams.

Both UCRE and PUI are the core courses in our curriculum to cultivate future UX practitioners. UCRE provides an overview to the field of human-computer interaction (HCI). My recitation session introduced HCI tools and usability engineering techniques to students, and helped them practice design in a systematic approach. PUI teaches students who want to express their interactive ideas in working prototypes. Through my recitation sessions, students learned how to design effective graphical prototypes, build user interfaces using Javascript, and perform user tests.

TEACHING PHILOSOPHY

He was incredible at **simplifying complex topics for me and making development seem accessible, interesting, and valuable**. He was also a master debugger. I must have spent over 4 hours with him across his office hours debugging various parts of my code, but he was always patient, always diligent, and always found the problem. Haojian consistently went above and beyond to ensure I had a great experience, and I can't thank him enough. **He really empowered me to enjoy coding**, so much so that I built my portfolio website from scratch.
-From an anonymous PUI student

Haojian was an excellent TA. He was extremely helpful and always quick to respond to messages and emails. **He always put little personalizations on the slide decks that made sections more interesting**. I always felt that his grading was clear and accurate; **I felt that we were being evaluated based on our efforts, progress, and willingness to learn**, and I felt encouraged to do my best on assignments and not just churn out something that would perfectly tick off the rubric. *-From an anonymous UCRE student*

The two comments I excerpt from anonymous student feedback surveys reflect my main teaching philosophy.

Making content interesting. It is the teachers' responsibility to make the content engaging and accessible. I always include my recent readings and interesting observations in my class materials. For example, a challenging component of UCRE is to teach synthesizing data and observations into insights¹. A good insight should get the team excited about building products people will love. However, in the first assignment, I noticed that many students reported shallow findings rather than insights. I added a few examples of insights in the following class. Indeed, when I met a student from my UCRE class recently (two years after the class), she reminded me of the "Pinterest v.s. Facebook" insight I introduced.

Question: Why do we need Pinterest if we already have Facebook? They both help users share.
Answer: Successful online products often correspond to our real-world behaviors. Facebook's  button is about **sharing**, but Pinterest's  button is about **hoarding**.

Recognizing the individuality and evolving capabilities of students. My students include junior HCI undergraduates, experienced practitioners who want to pursue systematic HCI training, and engineering students with little design experience. In both classes, I spent significant efforts at the beginning of the semester to pair students into groups so that they could learn from each other. I also considered students' backgrounds, progresses, and career goals in grading. For students with less prior experience, I started with more lenient rubrics and informed

¹<https://dscout.com/people-nerds/writing-user-insights>

them that I would increase my expectations throughout the semester. For top students, I complimented their works and showed them some even better designs.

Offering constant feedback to students and deliberating the feedback from them. I give constant feedback to my students. Many students under-perform because they had no clear expectation for the class. One female student in my PUI class is a capable, self-taught designer with multi-year industrial working experience. But, she was late for the first assignment and submitted a poor version (Grade: D). I emailed her my expectation immediately when I saw her submission and asked if she wanted to do a makeup submission with the same late penalty. Later, I also included a short note in each assignment grade to remind the student of her progress. She was well-motivated throughout the semester and got an A- at the end. Meanwhile, I also actively sought students' feedback on teaching. For example, I added more live programming sessions in PUI per the suggestions from students attending my office hours.

RESEARCH MENTORSHIP

My teaching experience extends beyond the classroom. I have also been a research adviser to nine undergraduate and three master's students throughout my Ph.D, of which five are female students. These advisory roles have resulted in three published papers (two UbiComp and one TOCHI) and two under review papers (one CHI and one IEEE S&P). Notably, eight of them have worked with me for more than one semester, and two have worked with me for over a year and a half.

My mentors' passion for HCI attracted me to this discipline. I wish to pass this passion on to my students. Most of my graduated advisees continue to pursue an HCI career, including two Ph.D. students at Georgia Tech and UIUC, and three professionals at Microsoft, Houzz, and Rex.

FUTURE TEACHING AGENDA

As a faculty, I look forward to continuing my growth as a teacher. My broad sampling of experience within computer science allows me to teach a wide range of intro-level computer/data/information science courses, such as **Programming for Data Science, Introduction to Web/Mobile Development, Applied Artificial Intelligence**. In addition, I can establish new courses in my research areas, such as: **Designing Privacy-first Systems, Building User-Focused Sensing Systems, Human-Computer Interaction, User Experience Research, Usability Engineering, Usable Security and Privacy, and Ubiquitous Computing**.