Jane Im's Teaching Statement

I aspire to be an educator and mentor who can help students learn knowledge and practical skills to develop their own ways of thinking. In my teaching, I aim to: 1) enable goal-driven practice, 2) communicate both high expectations and actionable feedback, and 3) center diversity, equity, and inclusion.

Teaching and Mentoring Philosophy

First, I aim to focus on *enabling goal-driven practice*. I believe that students learn concepts and apply them best once they have set a goal for a course, instead of straightly diving into course materials. Of course, some, or even many, students are not intrinsically motivated to set goals. I address such situations by designing course materials so that they provide real-world value—for example, instead of only learning concepts at an abstract level, students will analyze real-world data, develop web-based systems, deploy servers, etc. I also explicitly explain why the course content is necessary to learn for future professional opportunities, such as for securing internships or full-time jobs.

I also strive to *communicate both targeted feedback and high expectations, along with the rationale*, so that students can have a growth mindset. Research has shown that for students in marginalized groups, feedback can be overwhelming and demotivating—it becomes important to clearly explain the reason behind giving a particular feedback [1]. At the same time, I found that communicating that I have high expectations—meaning, I trust the student *can* achieve great things—often motivates and enables them to get out of one's comfort zone. In my teaching and research mentoring, I aim to periodically give students actionable feedback (along with the rationale) and explicitly talk about expectations to motivate them.

Lastly, I *center diversity, equity, and inclusion in classrooms*. Research shows that a student's identities and experiences are inseparable from how they learn [1]. I acknowledge that I can never completely understand every student's identities, and will strive to openly communicate about such topics as students wish. For example, a first-generation student in my course discussion section taught me *not* to make assumptions about how a student learns, which was a humbling experience. I also was not familiar with resources for improving course materials' accessibility, until I learned about them from the instructor, Dr. Colleen van Lent. I wrote more about relevant experiences, including initiatives I have led, in my diversity, equity, and inclusion statement.

Teaching Experience

At Michigan, I was fortunate to be a Graduate Student Instructor (GSI)[1] for two courses on web programming—SI 339 (undergraduate version) and SI 539 (graduate version), which were both taught by Dr. Colleen van Lent. The courses had over 110 students and emphasized a "hands-on approach to learning responsive, accessible front-end programming for web design" and covered topics include HTML5, CSS3, JavaScript, and the POUR design principles of accessible design (perceivable, operable, understandable and robust). My role was leading two discussion sections, where I covered programming concepts and principles taught in class. Each discussion section consisted of about 15 students. I also led weekly office hours and helped students during class activities.

By being a teaching assistant for these courses, I learned how to seriously reflect on students' feedback and improve my teaching skills. In Fall 2019, the first time I taught (SI 339), I received a comment from a student that I seemed less prepared for leading discussion sections. Reflecting on this feedback, for SI 539, I deliberately blocked out fixed times per week to spend more time coming up with programming exercises and familiarizing myself with the course materials. In particular, I sought to prepare at least one slide on a programming concept or a particular piece of code that I anticipated students might find confusing. Thanks to these efforts, I was able to get increased medians of 4.8–4.9 (out of 5) for teaching evaluation survey questions. One student even commented *"Jane is one of the best GSIs I ever had. She explained things clearly and went over concepts if they were confusing. Teaching coding is difficult, and Jane made it look easy and made me enjoy this class (when typically, I wouldn't have). She deserves to be rehired and any and all rewards!"* Another student wrote *"I like how Jane was super helpful during discussion and how we'd learn and some times go through a bit of homework."*

To further prepare for teaching as a faculty member, I also applied for and was selected to attend the Preparing Future Faculty Seminar, which was co-organized by Michigan's Rackham Graduate School and Center for Research on Learning and Teaching. During the month-long seminar, I learned about various evidence-based teaching methods grounded in research.

Mentoring Experience

During my PhD, I have mentored 16 students in research projects. Many of my mentees tended to be junior—seven students were either freshmen or sophomores when I first met them. While multiple people told me that

[1] GSI is the equivalent terminology for Teaching Assistant (TA) in Michigan.

it might slow my research progress because junior students tend to have less research skills, I actually think working with many junior students helped me to prepare for becoming a faculty member. I learned how to quickly onboard students to projects and help them become familiar with programming or research methods (e.g., conducting interviews). In particular, one student taught me a great deal about teaching and mentoring. When I first interviewed them for a undergraduate research assistant position, they shyly said they do not know a lot about web programming—I still vividly remember them quietly asking "Are you still willing to hire me?" And so our mentoring relationship began. It turned out they were not familiar with programming in general. But, they had a strong will to learn. For the course of over two years, I guided the student in learning how to build web applications and also how to evaluate systems. My approach was to first send tutorials so they could become familiar with programming concepts, and provide a skeleton system for them to experiment with, along with concrete system-development tasks. They played a key role in developing a browser extension that was important for a project's data collection. They also graduated with a full-time offer as a software engineer.

In my research mentoring, I periodically ask about each mentee's goal to find a project that benefits both of us. The majority of the students who were interested in research have published with me. For example, I mentored Ruiyi Wang, an undergraduate alum of University of Michigan CSE, on a systems-building project. Under my guidance, she strengthened her technical skills and learned how to conduct both quantitative and qualitative user studies for evaluating systems. She successfully co-authored a CHI 2023 paper with me, and I contributed to writing her a letter for graduate school applications. She was accepted to CMU for a Masters program, and even after she left Michigan, I periodically gave her guidance on how to think about selecting research problems. She is now a first-year PhD student at UCSD CSE. Most recently, I mentored Sumit Asthana, a CSE PhD candidate at the University of Michigan. I successfully guided him in publishing his first CHI 2024 paper. This included helping him learn how to better articulate the research questions, conduct a thorough literature review, deploy our system for pilot testing, design a survey for evaluation, conduct qualitative coding, and clearly write up the contributions and implications in the paper.

At the same time, I acknowledge that not every student is interested in research and publishing. Some students were very clear that they wanted a career in industry, and were looking for hands-on experience of designing interfaces, building systems, or analyzing data. For these students, I customize their roles so that they can learn the most practical skills, while still contributing to a research project.

Courses

I am excited to teach the following courses, along with intro-level Computer Science or Information courses.

Undergraduate-level

User Experience Design. I will teach basic methods for understanding user experience and ways to prototype and evaluate interactive technologies. Students will work on a semester-long project which will involve a range of exercises from conducting formative studies to making a low-fidelity prototype of a technology.

Web Programming. A course on developing web-based systems that covers JavaScript, HTML, CSS, and web frameworks (e.g., Django). Students will build and deploy a web application throughout the semester.

Ethics in Developing Systems. A course on how to critically think and incorporate ethics when developing technology. Real-world case studies will be discussed (e.g., companies scraping users' data without consent). I will also give students assignments on handling users' data, designing interfaces, etc. in ethical ways.

Graduate-level

Human-Computer Interaction. A graduate-level seminar on HCI; topics will span quantitative methods and qualitative methods for HCI research, overview of different subareas within HCI, how to flexibly and critically think about different kinds of HCI contributions (e.g., novel system ideas, empirical insights, policy angles).

Social Computing Systems. A course that aims to give students a taste of both breadth and depth of social computing research. Research on the design of social platforms, moderation, online governance, as well as the importance of considering cultures and regions in social computing research will be discussed.

Consent in Online Privacy and Social Computing. A research seminar for reading and discussing papers on consent related to online privacy and social computing. The course will cover definitions and history of consent and privacy, and discuss how to redesign and improve social technologies from the lens of consent.

References

[1] Lovett, M. C., Bridges, M. W., DiPietro, M., Ambrose, S. A., & Norman, M. K. (2023). *How learning works: Eight research-based principles for smart teaching.* John Wiley & Sons.