YASMINE KOTTURI TEACHING STATEMENT

My teaching goal is to educate students to possess not just technical proficiency but also to demonstrate social responsibility. As a graduate teaching assistant and guest instructor, I have developed three core aspects of my teaching philosophy: to foster growth mindsets through formative assessment, to highlight alternative perspectives and provide timely feedback through peer collaboration, and to create a safe learning environment through prioritizing inclusivity. In addition, working closely with three PhD students and nine undergraduate students from machine learning to psychology has informed my mentoring approach to respond to the unique and varied interests of each student, creating near-term action plans which align with students' larger career aspirations. Further, I believe that to address issues of access and equity in education requires engagement beyond the academic campus, and have put this into practice through building online, large-scale peer learning systems used around the globe (Kotturi *et al.*, 2015 Kotturi *et al.*, 2017, Kulkarni *et al.*, 2015) and hosting weekly, technical office hours at a local entrepreneurial hub for over four years (Kotturi *et al.*, 2022, Community Forge, 2023). Together, I am qualified to teach topics at the intersection of engineering, design, and equity and more specialized topics such as: Inclusive Futures of Work, Community-Based Research and Practice, and HCI for Startups.

GOALS AND METHODS

I prioritize methods which emphasize formative assessment, peer collaboration, and inclusivity. First, to foster a growth-mindset among students, I use formative assessment techniques where students share in-progress work with instructors and peers for quick feedback and iterate on their materials before the final submission. This draws on my experience fostering feedback on in-progress work among maker entrepreneurs (Kotturi *et al.*, 2019, Kotturi *et al.*, 2021, Kotturi *et al.*, 2024). In doing so, students are able to see improvements on assignments overtime, and this provides additional context for graders during summative assessments such as signals of effort. While feasible in small, design studio courses, engaging formative assessment techniques can be challenging at a larger scale. Therefore, I use peer feedback techniques to ensure timeliness of feedback and so that students are able to see alternative viewpoints. Doing so successfully requires careful design of rubric criteria, inter-rater reliability measures, and clear expectation setting (Kotturi *et al.*, 2015). This draws on my experience building and deploying online peer systems to tens of thousands of students (Kotturi *et al.*, 2015, Kotturi *et al.*, 2017, Kulkarni *et al.*, 2015), as well as with more formal training such as UCSD's *CSE 599 Teaching Methods in Computer Science* where I learned how to effectively plan and deliver discussion sections with clear learning objectives, implement active learning strategies, and create and use rubrics to support efficient and replicable grading (e.g. differences between binary and sliding-scale rubrics). Finally, I create inclusive communities for learning by ensuring diverse representation in learning materials, using inclusive language, raising awareness of implicit bias and stereotype threat, using accessible presentation formatting (e.g., verbal image description of visual information on slides), and creating both physically and psychologically safe learning environments (e.g., code of conduct, accountability and reporting mechanisms). To further bolster an inclusive environment, I engage students before and after class, and encourage them to visit during office hours.

TEACHING EXPERIENCE

To date, I am fortunate to have been a graduate teaching assistant for several courses which spanned various formats from computer labs with 200+ students to small design studios with 15 students, on both the quarter and semester-based systems. As the technical TA for Scott Klemmer's Introduction to HCI (UCSD CSE 170), I prepared and led weekly labs for 200+ students on web application development. In addition, I led two 70-minute studio sessions each week where I offered 30 students studio critique on their mobile web applications. Adopting studio critique---a common technique in design pedagogy where students showcase their work and receive instructor and peer feedback in real time---to a technical class facilitated self-reflection among students and is an essential method for developing a more critical computing workforce. As the first TA for Don Norman and Jim Hollan's Design of Everyday Things (UCSD DSGN 1), I assisted with the design of the

course curriculum and assignments, and led two-hour discussion sessions each week with 50 students. As the lead TA for Jim Herbsleb and Laura Dabbish's Ethics and Policy Issues in Computing (CMU 17-200), I created and presented a 60-minute lecture on ethics and policy issues in the future of work. This was a new module for the course, and I focused on shifts in the nature of digitally and algorithmically-mediated labor and resulting policy and ethical implications such as heightened worker surveillance and decreased labor protections. As the TA for Chris Harrison's Designing Human Centered Software (CMU 05-891) during pandemic lockdowns, I provided online instruction through remote content delivery and office hours. Finally, as a guest instructor for MIT's Teaching System Lab's course *11.155x Design Thinking for Learning and Leading*, I created and presented a lecture on storyboarding and prototyping techniques for teachers. This was yet another opportunity for me to explore my passion for bringing design pedagogy to new domains, from pre-service teaching to application development.

MENTORSHIP EXPERIENCE

I have mentored three PhD students and nine undergraduate students in their independent studies who have authored or co-authored publications in top tier HCI conferences such as CSCW, CHI and Learning at Scale (Blaising *et al.*, 2019, Blaising *et al.*, 2021, Kotturi *et al.*, 2017, Kotturi *et al.*, 2024) or have been key contributors to software development (e.g., peerdea.app/about-us.html, github.com/ykotturi/peerdea). My students have gone on to pursue graduate degrees in computer science at Stanford, and information science at University of Michigan, and postbaccalaureate research at Hasso Plattner. In addition, my students have successful careers in industry as software engineers, a senior product manager, a senior user experience researcher, a user experience designer, and a platform lead at Google, Amazon, Applied Intuition, Subtle Medical, and Booking and more. To foster their career success in either academia or industry, at the beginning of each semester we co-articulate three near-term goals with measurable outcomes. For instance, my current student from University at Pittsburgh is interested in pursuing a PhD and set one of his goals to learn React.js with the measurable outcomes of building a hosted prototype with one core feature, web or app based, following a human-centered design protocol. Half-way through the semester, we revisit and revise goals based on students' new learnings and interests. This not only helps to visualize progress, it ensures strong communication and maintains malleability, as goals inevitably develop and shift. As faculty, I will continue near-term goal setting as a regular practice with my students and connect such goals with their larger career aspirations.

EXAMPLE FUTURE COURSES

My teaching portfolio will develop based on the goals of my department. I am qualified to teach courses at the intersection of design, equity and engineering such as: interaction design, human-computer interaction research, human-centered software development (mobile and web applications), design methods (human-centered design, participatory design, community-based design), user research and qualitative research methods

In addition, I am qualified to teach the following specialized courses:

Inclusive Futures of Work which focuses on new forms of digitally and algorithmically-mediated work such as gig work, online freelancing, and micro-entrepreneurship. This course delves into platform design, technological advancements (e.g., generative AI in the future of work) and ethical and policy implications. Students engage in a project-based curriculum where they first explore histories of labor and labor movements, focused on low income and marginalized workers. Through a deeper understanding of historical patterns of power asymmetries, students are then tasked to reimagine futures of work which center equitable work practices. For instance, students might redesign two-sided online marketplaces to embody non-capitalist values or support various digital literacies. This class is based on my experience conducting research with crowd workers, online freelancers, and micro-entrepreneurs, as well as the collaborations I led with Etsy's Seller Team and Instagram's Small Business Team.

Community-Based Research and Practice which focuses on community-based approaches in computing. This is a seminar-style course which explores the limits of professionally-led human-centered design processes when centering equity and justice in design. To do so, this course highlights canonical scholarship in community-based participatory design, and provides practical guidance for conducting such methods in research and practice. For instance, community-based approaches often call into question power dynamics across stakeholders and researchers, push against universalist tendencies in computing, require historical analyses, and interrogate systemic barriers to more equitable research practices. This class is based on my experience conducting community-based participatory research with local nonprofits, co-organizing workshops on community-based research at FAccT and CSCW, as well as my experience using and teaching human-centered design methods.

HCI for Startups which focuses on human-centered and data-driven development techniques to build technology effectively (or remix existing technology) while exploring a range of commercialization models such as public interest technologies, benefit corporations, non-profits, as well as more traditional ventures. This is a technical, project-based course where students ideate, prototype, build and ship a minimal viable product. This class is based on my research experience working with 177 entrepreneurs, designing commercially viable technology, and a recent partnership with CMU Tepper's School of Business where I designed and led a course on technology at a local entrepreneurial hub (Community Forge, 2022).

Regardless of the courses I teach, I am dedicated to creating an effective learning environment for students to achieve their goals and career aspirations.

REFERENCES

Blaising, Allie, Yasmine Kotturi, Chinmay Kulkarni, and Laura Dabbish. "Making it work, or not: A longitudinal study of career trajectories among online freelancers." *Proceedings of the ACM on Human-Computer Interaction* 4, no. CSCW3 (2021).

Blaising, Allie, Yasmine Kotturi, and Chinmay Kulkarni. "Navigating uncertainty in the future of work: Information-seeking and critical events among online freelancers." In *Extended abstracts of the 2019 CHI conference on human factors in computing systems*. 2019.

Community Forge. "Don't Let Tech Stop Your Business' Growth. Attend this Biz Tech Class + learn new ways Tech can amplify + support your Business!" Published 31 Mar 2022, https://twitter.com/CommForgePGH/status/1509617285161312261/photo/1

Community Forge. "TECH HELP DESK We provide collaborative, side-by-side tech help for your everyday small business technology issues." Accessed 25 Nov 2023, https://www.forge.community/services/tech-help-desk

Kotturi, Yasmine, Andrew Du, Scott Klemmer, and Chinmay Kulkarni. "Long-term peer reviewing effort is anti-reciprocal." In *Proceedings of the Fourth ACM Conference on Learning@ Scale*. 2017.

Kotturi, Y., Blaising, A., Fox, S., Kulkarni, C. "The Unique Challenges for Creative Small Businesses Seeking Feedback on Social Media." ACM Conference on Computer Supported Cooperative Work. 2021.

Kotturi, Yasmine, Chinmay E. Kulkarni, Michael S. Bernstein, and Scott Klemmer. "Structure and messaging techniques for online peer learning systems that increase stickiness." In *Proceedings of the Second ACM Conference on Learning@ Scale*. 2015.

Kotturi, Yasmine, Herman T. Johnson, Michael Skirpan, Sarah E. Fox, Jeffrey P. Bigham, and Amy Pavel. "Tech Help Desk: Support for Local Entrepreneurs Addressing the Long Tail of Computing Challenges." In Proceedings of the CHI Conference on Human Factors in Computing Systems. 2022.

Kotturi, Yasmine, Jenny Yu, Pranav Khadpe, Erin Gatz, Harvey Zheng, Sarah Fox, and Chinmay Kulkarni. “Peerdea: Co-Designing a Peer Support System with Creative Entrepreneurs.” ACM Conference on Computer Supported Cooperative Work. 2024.

Kulkarni, Chinmay, Julia Cambre, Yasmine Kotturi, Michael S. Bernstein, and Scott Klemmer. "Talkabout: Making distance matter with small groups in massive classes." In *Proceedings of the 18th ACM conference on computer supported cooperative work & social computing*. 2015.