I am pursuing a Master's in Computer Science emphasizing human-computer interaction, with career aspirations to pragmatically combine CS, human-centered design, and diversity work through industry research and development. My research interests include software engineering, developer productivity, and equitable/intelligent user interface development tools. Breaking down cognitive barriers inhibiting productivity and access to technology motivates me to examine these topics through racially, culturally, and socioeconomically sensitive lenses.

One of UCLA's strengths is its potential to inform software engineering industry standards and practices. As such, I believe the school will fulfill my research interests, particularly with Miryung Kim's lab that seeks to improve software engineering tools and productivity, though I am open to other areas of research. With my passion for diversity, interdisciplinary research background, and professional experience, I am a strong asset to UCLA's CS department.

At Harvey Mudd, I was a research assistant for Zachary Dodds's NSF-funded "Middle-Years CS" lab group. We developed a CS curriculum appropriate for elementary/middle school students, supplemented with educator tools using Scratch and Arduino. Our group conducted professional development workshops for underprivileged teachers and students, presented at the SIGSCE conference, and published a paper on our findings. Our analysis concluded that teachers and students engaged with the curriculum significantly raised their confidence, awareness, and comfortability levels in CS topics. Currently, San Francisco Unified School District adapts our courses into their own curriculum. My research with underrepresented schools, which I hope to extrapolate to software engineering, taught me how socioeconomic and educational factors affect technical learning ability and familiarity with software tools.

For my senior capstone industry-sponsored project, I helped develop a full-stack web application for GoDaddy's website building tool. While implementing the front-end and UX prototyping, I also spearheaded user testing sessions on CS students and faculty to survey ease of use and cognitive load. These were measured quantitatively through heuristic evaluation, and qualitatively through facial and screen interactions. Our team ended up winning the CS department's "Outstanding Clinic Team" award. Designing these CS-focused user tests gave me valuable insight into how software engineers might use tools, thinking critically of demographics such as age and education. I continue to use these experiences as a lens to evaluate the inclusivity of practices and make informed decisions.

In two years as a Software Engineer III, I boosted developer productivity, reduced the friction of new hire onboarding, and homogenized our cross-platform mobile framework, all in regards to UI development. I proactively created prototypes and implementations for our uneven app UI, making it adhere to consistent Android/iOS platform standards. To bolster institutional memory and designer-to-developer handoff, I wrote and standardized our first UI development documentation and created robust style guidelines. I also implemented three fully compilable and runnable training tools for each of our mobile UI platforms, enabling new developers to experiment without a complex development environment.

Volunteering with nonprofits today, I continue striving to make technology accessible. As a tech lead and advisor for Circle K, I oversee major software and data science projects maintained by college students. These projects facilitate communicating service event information, optimizing event logging/tracking, and visualizing member data trends. While mentoring these students, I implemented processes that raised developer productivity, such as continuous integration and development (CI/CD) pipelines, by understanding the educational barriers faced by these student developers.

I wish to understand how varied demographics approach and benefit from programming.

I hope to leverage my research experience, industry perspective, and intersectional mindset so that I can continue exploring inclusive software engineering and UI development tools at UCLA.