My computer science journey began unexpectedly during a study abroad at UC Berkeley, where an introductory CS course sparked my switch from economics to Electrical Engineering and Computer Science at the University of Tokyo. Since then, inspiring professors and mentors have helped me build a strong foundation and appreciation for research. This unconventional path has shown me the transformative power of education and mentorship, fueling my commitment to teaching and advising, especially for those with limited resources.

During my Ph.D., I gained extensive teaching and mentoring experience, closely guiding seven students from diverse backgrounds, many of whom published their first peer-reviewed publications at top venues. As head TA, I managed and co-instructed two courses (Introduction to AI and Data-Centric Machine Learning), delivered over 27 invited talks to research groups, gave nine guest lectures across four universities, and presented a well-received tutorial on Retrieval-Augmented LMs at ACL. I am eager to continue mentoring and teaching students from diverse backgrounds as a professor.

Teaching and Lecturing Experience

During my Ph.D., I performed a variety of teaching roles. At the University of Washington, I served as Head TA and co-instructor for two courses, **CSE 473 - Introduction to Artificial Intelligence** (undergraduate-level)[1] and **CSE 599J - Data-Centric Machine Learning** (graduate-level).[2] I also led and presented a conference tutorial at ACL 2023[3] and more than 30 invited lectures and external talks.

Head TA For Undergraduate Artificial Intelligence: As the Head TA for the undergraduate AI course taught by Professor Hannaneh Hajishirzi, I led efforts to address a significant rise in enrollment, reflecting the rapidly growing interest in AI. This increase required a comprehensive redesign of the course structure, including lectures, assignments, and grading processes. I managed a team of 10 TAs, revamped four major written assignments, and designed two new in-class exams to deepen students' understanding of the material.

To create a more inclusive environment for students from diverse backgrounds, we implemented several systematic changes. First, I initiated a lecture notes program, assigning a TA each week to attend class and create digital notes for students to review afterward. Second, I organized TAs to monitor the class forum, with two TAs assigned each week to respond to questions within 24 hours. Finally, I increased office hour availability around assignment deadlines to ensure students could access support when needed. These efforts collectively improved accessibility and engagement.

Head TA and Co-Instructor of Graduate Data-Centric Machine Learning: For the graduate-level Data-Centric Machine Learning seminar, a newly introduced course, I collaborated closely with Professor Pang Wei Koh to structure the course topics, curate both mandatory and optional reading lists, and design grading and course policies. I also led in-class discussions. I managed all grading and maintained regular communication with students for their weekly presentations, providing constructive feedback to deepen their understanding and enhance their presentation skills—a vital competency for Ph.D. students. Additionally, I advised students on their final projects, several of which culminated in publications at top-tier conferences [1], highlighting the course's significant influence on advancing students' research trajectories.

Tutorials, Invited Lectures, and Talks: Beyond my formal teaching roles, I have delivered over 30 external talks throughout my Ph.D., engaging with a wide range of audiences. Notably, I led **the first ACL tutorial on Retrieval-augmented LMs** [2], which drew over 300 participants, and I have given guest lectures on the same topic at institutions such as the University of Washington, Yale, Carnegie Mellon University, and University of Wisconsin Madison, collectively reaching over 1,000 students. I also gave talks on my research at prominent industry research groups (e.g., Meta, Google, Apple, Amazon, Microsoft), national research labs (e.g., Japan AIP, NIH), and academic groups internationally. To ensure relevance and engagement, I tailor my presentations to suit the diverse backgrounds of each audience.

Mentoring Experience

During my Ph.D. at UW, I mentored seven students, guiding many toward their first publications. I also held public office hours to support students beyond UW, providing mentorship to a broader community.

Advising: I was extremely fortunate to work with exceptionally talented and enthusiastic undergraduate and Ph.D. students throughout my Ph.D. A few of my former students include:

Note: My original statement contains individual mentoring stories, which I have not included in this public version. If you are applying for academic jobs and are interested in the original versions or additional details, I am happy to share more upon request!

Community Office Hours and Pre-application Mentorship Program: I hosted community office hours for three years, offering two 30-minute 1-on-1 slots open to anyone interested every week. Across about 100

---

[1] https://courses.cs.washington.edu/courses/cse473/23au/
[2] https://koh.pw/cse599j/
[3] https://acl2023-retrieval-lm.github.io/

sessions with students from over 15 countries, we discussed ongoing research, which occasionally led to conference papers, Ph.D. applications, or broader research insights. Several attendees went on to secure Ph.D. offers from top institutions like CMU and UW. Additionally, I actively mentored three students in the UW CSE Ph.D. pre-application mentorship program, with one successfully joining UW's Ph.D. program.

Teaching and Mentoring Philosophy

My extensive teaching and mentoring experiences have shaped the principles I discuss below, indicated as MENTORING and TEACHING, respectively.

Balancing clarify with abstraction TEACHING: When introducing new concepts, I prioritize a clear progression from high-level ideas to detailed implementation. I start with core concepts in accessible language, avoiding jargon and complex equations, and then gradually move to detailed explanations. I often conclude with code snippets or practical examples to reinforce understanding. This structured approach helps students connect theory with practical applications, supporting a comprehensive grasp of the material. In designing course materials, I also make connections to real-world applications, illustrating how these concepts relate to students' lives and practical use cases.

Building interactive, inclusive and psychologically safe environments MENTORING TEACHING: I prioritize interactive teaching to keep students engaged, frequently pausing during lectures to ask questions and encourage participation. Understanding that some may feel uncomfortable speaking up, I create an inclusive environment by offering non-verbal options like Sli.do for anonymous questions, which I address at the end of each session. In advising, I ensure regular weekly or bi-weekly 1-on-1 meetings with students as well as project meetings to provide technical support and offer a space where students can comfortably share concerns or seek help they might hesitate to mention in larger groups. I remind mentees that it is perfectly acceptable to disagree with me or senior collaborators and encourage them to reach out whenever needed.

Focusing on uniqueness and long-term impacts MENTORING: I encourage my students to pursue topics that genuinely interest them rather than following trends since this fosters a unique and robust research profile. I also emphasize the importance of considering the broader implications of their work—how it can meaningfully contribute to the field beyond achieving publication. While impactful projects require patience, junior students often feel pressured to submit and publish quickly. In these moments, I remind them of the value of prioritizing quality over quantity and maintaining resilience when progress is slower than expected or initial results are disappointing.

Fostering critical thinking and precision in research MENTORING: I teach my mentees to critically evaluate their projects, from refining research questions and exploring alternative methods to analyzing results with rigor, even when outcomes appear positive. This fosters a mindset that values depth over surface-level success. Attention to detail is equally emphasized. I stress meticulous experimental design, clear and well-supported writing, and refined presentation skills since effective communication is as essential as solid research. This comprehensive approach to conceptualization, execution, and communication enables students to develop impactful projects that withstand scrutiny and inspire further exploration.

Teaching Range

I am eager to teach a wide range of computer science courses, including those on NLP, AI, and ML, as well as emergent topics on the Foundations and Applications of LLMs. In addition to core topics, I am excited to develop and teach new courses on advanced NLP and ML subjects. These could include focused areas like Data-Centric Machine Learning and Multilingual NLP, as well as cutting-edge LLM areas such as Augmented LMs and their real-world applications. I am also eager to teach or co-teach interdisciplinary courses on the societal implications of AI, examining its impacts and risks, such as privacy concerns, copyright challenges, biases, and environmental sustainability.

References

[1] Chen, **Asai***, Mireshghallah*, Min, Grimmelmann, *et al.*, "Copybench: Measuring literal and non-literal reproduction of copyright-protected text in language model generation," in *Conference on Empirical Methods in Natural Language Processing (EMNLP)*, 2024.

[2] **Asai**, Zhong, Chen, Koh, Zettlemoyer, *et al.*, "Reliable, adaptable, and attributable language models with retrieval," *ArXiv*, 2024.