Over the past decade, I have had the privilege of working with various students in many different domains, including formal and informal mentoring, as a teaching assistant for CS courses, and in non-academic settings. Throughout these experiences, I have developed a love for interacting with students and sharing ideas and knowledge. I have additionally become committed to core principles for effectively communicating information, including diversifying projects and lectures to suit the learning styles of different students, encouraging participation and feedback from students, and teaching students to teach. As a professor, I aim to work with students from diverse backgrounds and disciplines in order to broaden CS research directions.

Advising and Mentoring As a PhD student, I have worked with a variety of students, including junior PhD students, master's students, and even high school students on research projects. I highlight a few examples here:

- I worked with Mengzhou Xia (CMU, MS; now a PhD student at Princeton) on developing an adversarial approach to reducing racial bias in hate speech classification. I proposed the initial project direction to her, and I regularly met 1:1 with her to discuss model and evaluation ideas. I provided Mengzhou with advice on technical paper writing and preparing an oral presentation when our work was accepted to the SocialNLP workshop at ACL [1].
- I advised Nupoor Gandhi (CMU, PhD) on developing novel loss functions to improve cross-domain coreference resolution. I helped Nupoor construct the project to focus on a public data set (medical notes) so that results would be publishable, while also developing tools that would be useful in processing private data (child welfare notes) as part of an ongoing collaboration with the Allegheny County Department of Human Services. My role in this project additionally involved interfacing between Nupoor and our Allegheny County collaborators, arranging for her to receive practice in presenting her work to a broader audience, but also reducing her involvement in administrative tasks. I also aided Nupoor in submitting and presenting her work at the CRAC workshop at ACL 2021 [2].
- I served as a volunteer mentor for the *Teen Research in Environmental Science Program* at the University of Pennsylvania. While this program usually provides high school students with the opportunity to conduct environmental science research in a laboratory, the COVID-19 pandemic forced the program to seek mentors for virtual projects in 2021. I advised two students on analyzing how news articles have portrayed environmental science issues, such as global warming. As the two students had different levels of coding experience, I structured one project to focus on word statistics and analysis and the other to involve developing a machine learning classifier. I additionally structured both projects to have some overlap in topic, so that the students could discuss their projects with each other, but to focus on different research questions and data sets, so that each student could have ownership of their own project. Both students are aiming to submit their work to local science fairs, and one student is working towards a workshop publication.

These experiences have helped me learn how to design flexible projects, which can be scaled up or down in complexity depending on the students' abilities. They have also shown me the importance of guiding students not only in conducting experiments but also in presenting their work and collaborating with others. Working with students and witnessing their ideas and enthusiasm

has strengthened my own motivations in conducting research, and as a professor, I look forward to building longer-term mentoring relationships with future students.

Courses and Lectures I have served as a teaching assistant three times as a PhD student. I have served as a TA twice for a Carnegie Mellon course on ethics in natural language processing, including during the second iteration of the course. As this newly constructed course was still being developed, I had substantial involvement in crafting its curricula. I suggested additional material to include, like arranging for guest lectures from a philosophy professor and an expert in algorithmic fairness. I additionally wrote new coding homework assignments (example) and revised existing ones based on my experiences as a student in the course the previous year. I also advised many course projects and wrote a comprehensive document of project ideas. Future iterations of the course have continued to include the material I created.

I additionally served as a TA for a graduate-level introductory course on natural language processing, including delivering several lectures and running recitations. In years when I was not a TA for the class, I have on several occasions delivered guest lectures on computational social science. While I would be able to teach similar courses on AI ethics and natural language processing, I am also excited about crafting new courses, such as one on computational social science.

Non-CS Experience Finally, I have a substantial amount of teaching experience in non-CS contexts, which has provided me with outside perspectives on strategies for giving feedback and communicating with students. I have been a certified archery coach for over 10 years. As an undergraduate student, I chose to found an archery team and spend most of my time coaching others rather than improving my own performance. I also trained underclassmen in coaching and running team logistics to ensure longevity of the team after I graduated, which gave me experience not only in teaching, but also in training others to teach. I have additionally coached part-time at a variety of archery ranges in New York, New Jersey, and Pennsylvania, including holding 1:1 lessons, introductory classes, and running longer-term youth groups. I have found many of the strategies I learned in coaching seminars and through experience to be useful in working with students. For example, constructive coaching involves focusing on what someone could change or improve, rather than what someone has done wrong. Instead of telling a student, "your writing is too abstract" it is more effective to tell a student "you could make your writing stronger and more concrete by adding specific examples".

Furthermore, as an undergraduate Leader Trainer, I taught classes on hiking skills like navigation and water filtration to student orientation trip leaders. This process involved both structuring curricula and lesson plans as well as assessing which students were qualified enough to lead successful trips. I additionally volunteered as a tutor to teach GED preparatory classes to inmates at local correctional facilities. Working with these students was often extremely challenging, as some of them did not speak English and many of them had very scattered educational backgrounds. These experiences have taught me the importance of regularly checking in with students to see how much of the material they have understood. Additionally, it is often beneficial to present the same information multiple times in different formats, as it is difficult to predict which format will resonate with which students. I hope to synthesize my experience teaching a variety of subjects to a broad range of students in order to develop CS curricula that are both rigorous and approachable.

References

[1] Mengzhou Xia, **Anjalie Field**, and Yulia Tsvetkov. Demoting racial bias in hate speech detection. In *Proc. of Workshop on Natural Language Processing for Social Media at ACL*, pages 7–14, 2020.

[2] Nupoor Gandhi, **Anjalie Field**, and Yulia Tsvetkov. Improving span representation for domain-adapted coreference resolution. In *Proc. of Workshop on Computational Models of Reference, Anaphora and Coreference at EMNLP*, pages 7–14, 2021.