Teaching Statement: Clayton Thomas

Teaching has always brought me energy, and I am enthusiastic about this aspect of my career going forward. In my own academic work, I greatly value exposition and understanding the high-level message, and I greatly value these in teaching as well.

Specific themes in teaching I am interested in include:

- **Teaching students to ask the right questions.** I believe one compelling way to help teach this skill is with deep and exploratory case-studies illustrating the material (possibly serving as a the foundations of a higher-level corse, or a highlight of some of the more important topics in lower-level corse.
- **Developing quality, cohesive lecture notes.** While textbooks have their place, in my experience they are often unapproachable for students due to their length and generality. I wish to craft quality self-contained notes for students (and I believe this synergistically fuels good research by working to perfect the foundations of a field).
- **Presenting material in a variety of different ways, including "teaching through exercises."** I believe many courses would benefit from "warm-up" exercises, which are never graded, but which illustrate or teach the material of the lectures through a set of (mostly very easy and incremental) questions. I believe this approach—and complementary presentations such as illustrations and bullet-pointing text—is beneficial for diverse learning styles.
- **Courses on "economics and computation".** My research is in economic design, and my Ph.D. is in computer science, which I believe is highly synergistic. I also believe these fields are ideal for a theory- and case-study-heavy course for graduate students or advanced undergrads. I was a teaching assistant for the highly popular Princeton course Economics and Computation, taught by my advisor Matt Weinberg, with consistent enrollment of over 200 students.[1] I would be thrilled to develop analagous courses with a focus on economic perspectives.

My experiences with and approach to mentoring include:

- I have intensively mentored a number of junior researchers through joint research projects. From my time at Princeton, this includes Aadityan Ganesh (Princeton CS PhD student) and Ezra Edelman (then a Princeton CS undergrad). At Microsoft Research (MSR), this includes Ruqing Xu (MSR intern, Cornell Econ PhD student), Joey Feffer (MSR intern, Stanford GSB PhD student), and Kiran Dwivedi (MSR pre-doc).
- **Exploratory project development, coupled with systematic research.** I believe that good research skills are honed through technical papers that expand or clarify prior work, but that the most exciting research is born from long creative exploration. This is how we came up with the idea for my largest research agenda thus far (on strategyproofness-exposing mechanism descriptions)—long exploratory collaboration with my mentor Yannai Gonczarowski, touching on many diverse topics with the motivation of explaining strategyproofness before settling in on our specific framework.

My experiences with and approach to inclusivity involve:

[1] My teaching experience also includes TAing an introductory theoretical computer science course at Princeton, and TAing two semesters of a similar course at my undergrad.

- **Open dialogue in mentoring.** I believe in setting clear guidelines regarding my advising style, including explicit and publicly-available statements.[2] I also believe in posting helpful "how-to" guides for academia, which is often rendered unapproachable by a set of implicit, but crucial, norms. I have also been a "shoulder to cry on" in academia many times, including helping others navigate difficult relationships with researchers in my own network.

- **Appreciation of differing backgrounds.** During my PhD I attended "RISE" (Research Inclusion Social Event) meetings, where we discussed a range of DEI topics, from gendered "data gaps" in medical research, to "pipeline issues" for underrepresented minorities in academia. My partner is an immigrant, and has been marginalized based on race and gender, which has opened my eyes to the prevalence of these issues. More broadly, I strive to understand diverse experiences and backgrounds, which I think is one of the most exciting things about academia.

[2]For examples from more direct-student-mentorship-heave fields include http://yardi.people.si.umich.edu/advising.html and https://www.charapodimata.com/files/advising-doc.pdf.