

Teaching!

I have always believed in the power of personalized education. From my undergraduate days at USC to my current MS at Duke, I have been fascinated by the art of teaching and the importance of understanding a student's unique learning style. I contribute to the academic community via two distinct approaches: creating resources and direct mentorship.

Creating resources is essentially a formal way of saying “**creating and sharing my own lecture notes**,” a habit I've maintained since my sophomore year. The motivation was simple: many courses I wanted to take lacked publicly available scribed notes, so I decided to fill the gap for future students.

I am equipped with a niche skill: **real-time \LaTeX typesetting** using a heavily snippet-augmented Vim and Inkscape workflow. This allows me to turn live lectures into detailed, self-contained write-ups. I have done this for essentially every advanced Math/CS class I took, making them publicly available (with instructor permission of course). This ranges from technical undergrad courses like Real Analysis or Algorithm Design to graduate ones like Measure Theory and Approximation Algorithms. I pay particular attention to “sticking points” where first-time learners often stumble. For example, I went in-depth explaining the intuition of the ϵ - δ language for analysis and wrote supplemental sections on residual graphs for the Ford-Fulkerson algorithm. These documents, often exceeding 100 pages, serve as hands-on course materials for future students taking the same classes. It has been incredibly fulfilling to see my notes circulating among the STEM communities at USC (not so much at Duke unfortunately... the TCS population is small and I've taken TCS classes only). (You can actually find a few samples linked in my attached CV!)

Then there is **direct mentorship (TA)**: to me, **teaching is genuinely fun!** I have thoroughly enjoyed stepping out from behind the screen to serve as a TA, particularly for theory-heavy classes where the challenge lies in explaining abstract objects (no TAing for debugging code, ever). In my office hours, I constantly remind myself that everyone comes from a diverse background with a unique way of learning. **I tailor my pedagogical approach to the individual**; some prefer a rigorous theoretical derivation, while others are visual learners who thrive on geometry. On my end, it is an engaging but fun challenge to adapt to all these different learning styles. Over time, I have honed the ability to make abstract proofs accessible to everyone. I take great pride in reading the numerous personal thank-you letters I receive at the end of each semester.

At Brown University, I aim to continue contributing to the teaching community via both approaches. I look forward to producing high-quality lecture notes for the curriculum and actively participating in the department as a mentor and teaching assistant.