



October 4, 2023

Re: Application for Assistant Teaching Professor at the Computer Science Department, Search 127300

Dear Search Committee:

I am writing in response to your advertisement for the **Assistant Teaching Professor in the Computer Science Department** at Carnegie Mellon University.

I am a Ph.D. candidate in Computer Science and Engineering at the University of Michigan, and I expect to graduate in May 2024. I work at the intersection of software engineering and cognition with an emphasis on pedagogy and student learning, and am advised by Professor Westley Weimer. I hold a Bachelor of Science in Computer Science from Washington and Lee University, and a Master of Science in Computer Science and Engineering from the University of Michigan.

I am primarily interested in a faculty position that emphasizes undergraduate education, mentorship, and research. My liberal arts education as an undergraduate has shaped my firm belief in the importance of the quality of student-faculty interactions and the deeper engagement with students possible at CMU. **I am passionate about teaching at all levels of the CS curriculum**, and have experience facilitating learning as an instructor of record, with an emphasis on equitable instruction and promoting student academic belonging, at a variety of course levels and classroom sizes (introductory CS1, intermediate “Data Structures and Algorithms”, and an upper-level databases elective) across a large public university and a liberal arts college (University of Michigan and Washington and Lee University respectively).

As a Ph.D. student at Michigan, I have participated in several intensive professional development programs to develop as an educator, including completing the Preparing Future Faculty program (centered around course design and equity-focused instruction) and the Graduate Teacher Certificate program (focusing on inclusive teaching workshops, instructional practice, and mentorship). Further, **I received a departmental Graduate Instructor Award for outstanding teaching in 2021.** I believe that my teaching experience and philosophy equips me well to contribute to the academic mission at CSD and engage in broader aspects of the department’s educational programs (e.g., outreach for students), and that I would be a valuable addition to your teaching-track faculty.

I believe the one course per semester teaching load at CSD will provide me the opportunity to pursue scholarship and mentor undergraduate students. My passion for fostering academic belonging and broadening participation in CS extends beyond the classroom: **I have an established track record of mentoring students – particularly women students and students from less represented groups – and making research accessible to students with varying strengths and areas for improvement.** I have also conducted outreach to support students

needing special accommodations in a research setting. My research admits a variety of projects that are approachable and engaging for students with different interests, ranging from formal reasoning to systems design to human studies. I have also previously worked with faculty from different departments (e.g., Aerospace Engineering, Psychology), and look forward to using that experience to conduct cross-department research at CMU. Further, I have previously written proposal text for, and obtained, small grants to support undergraduate research, and I plan on pursuing similar funding opportunities to support undergraduate research at CMU. In summary, my experience with interdisciplinary research and student mentorship with a focus on broadening participation positions me well to continue scholarship as a teaching-focused professor at CSD.

Enclosed for your consideration are my (1) curriculum vitae, (2) statement on teaching philosophy, (3) video sample of my teaching methods (taken from a previous CS1 course taught over Zoom), (4) broader impact statement, and (5) statement on research. Please do not hesitate to contact me if you have any questions. Thank you very much for considering my application, and I hope to hear from you soon.

Sincerely,

A handwritten signature in black ink, appearing to read 'Hammad Ahmad', with a stylized flourish at the end.

Hammad Ahmad
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