Bridget Agyare

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Education

University of Illinois, Urbana-Champaign — Urbana, IL
Ph.D. in Computer Science — Aug 2024–Current

University of California, Berkeley — Berkeley, CA
B.S. in Electrical Engineering and Computer Science — Aug 2020–May 2024
Research Advisor: Dr. Gireeja Ranade

Research Interests

Computer Science Education, Broadening Participation in Computing, AI for Education

Publications

p1. **B. Agyare**, A. Matsumoto, M. Patel, and G. Ranade, "Student Feedback on Opt-in, Inclusive, Course-Integrated Study Groups," *IEEE Frontiers in Education Conference,* Oct. 2023.

Workshop Papers and Posters

w2. M. Patel, **B. Agyare**, and G. Ranade, "Increasing Study Group Success With a Supplementary Course for Students in Gateway AI Classes," *AAAI Symposium on Increasing Diversity in AI Education and Research,* Mar. 2024. Poster.

w1. F. Ali, **B. Agyare**, G. Guidi, B. Brock, and K. Yelick, "Triangle Counting Algorithm with GraphBLAS," *LBNL Computing Sciences Summer Program Poster Session,* Aug. 2021. Poster.

Work Experience

IBM T.J. Watson Research Center, *Research Software Engineering Intern* — May 2024–Aug 2024
Integrated Mamba architecture into team workflow for AI inference optimization.
Tools: Python, PyTorch

Microsoft, *Software Engineering Intern* — May 2023–Aug 2023
Developed storage resiliency measures for virtual storage spaces in Windows.
Tools: C++, WinDbg

Google, *Software Engineering Intern (STEP)* — May 2022–Aug 2022
Built new developer features for Google's internal code reviewing tool.
Tools: Go, SQL, HTML

Lawrence Berkeley National Laboratory, *Research Intern* — May 2021–Dec 2021
Implemented graph algorithms for complex network analysis.
Research Advisors: Dr. Katherine Yelick, Dr. Benjamin Brock, Dr. Giulia Guidi

Awards and Scholarships

- National GEM Consortium Ph.D. Fellowship, Sponsored by IBM Research 2024
- UC Berkeley Outstanding Graduate Student Instructor Award 2023
- Cal Alumni Association Leadership Award for Returning Students 2023
- Tapia Conference Scholarship, UC Berkeley EECS Department 2023
- Grace Hopper Conference Scholarship, UC Berkeley EECS Department 2022

Teaching

Head Teaching Assistant at UC Berkeley EECS Spring 2022, Fall 2022, Spring 2023

- Designing Information Devices and Systems II (EECS 16B)
  Course covered introductory linear algebra and circuitry concepts.
  — *Worked with professors to implement course logistics, managed a course staff of >40 TAs, and staffed office hours and online forums for course sizes of 1000, 200, and 400 students.*

- **Tutor** at UC Berkeley EECS Fall 2021
  Designing Information Devices and Systems II (EECS 16B)

Presentations and Talks

Talks:

- **Scalable Undergraduate Research Mini-Projects in a Gateway AI Course** Mar. 2024
  AAAI Symposium on Increasing Diversity in AI Education and Research

- **Inclusive Study Group Formation At Scale** Oct. 2022, Mar. 2023
  UC Berkeley, CS 375 — *Teaching Techniques for Computer Science*

Panels, Presentations, and Public Speaking:

- **Student Speaker**, *Joint California Summit on Generative AI,* hosted by UC Berkeley CDSS, Stanford HAI, and the California Governor's Office May 2024
- **Panelist**, *A Conversation with the AiiCE Student Advisory Board: Considering Identity & Inclusion in Computing Spaces,* hosted by the Alliance for Identity-Inclusive Computing Education Jan. 2024
- **Student Speaker**, *Joseph T. Gier Memorial Sculpture Dedication Ceremony,* UC Berkeley Sept. 2023
- **Presenter**, *EECS Undergraduate Student Survey Presentation: Diversity in the Department,* at UC Berkeley EECS Faculty Retreat Mar. 2023

Conference Presentations: FIE 2023 [p1]

Leadership and Outreach

- **Student Advisory Board Member**, Alliance for Identity-Inclusive Computing Education (AiiCE) 2022–Present
- **President**, Black Engineering and Science Student Association (UC Berkeley's NSBE Chapter) 2023–2024
  Previous: External Vice President (2022-2023), Pre-Collegiate Initiative Chair (2021-2022)
  NSBE Annual Convention Attendee: 2021-2024
- **Committee Member**, UC Berkeley EECS Department Student Anti-Racism Committee Jan.–May 2022

Skills

- **Programming Languages:** Python (NumPy, Pandas, PyTorch), Java, C++, C, Go, SQL
- **Advanced Undergraduate Coursework:** Introduction to Machine Learning; Deep Neural Networks; Efficient Algorithms and Intractable Problems; Probability and Random Processes; Optimization Models in Engineering; Principles and Techniques of Data Science; Language, Race, and Power in Education; Doing Feminist Research