

EDUCATION

University of Illinois Urbana-Champaign Ph.D. in Computer Science Research Advisor: Dr. Colleen Lewis	Urbana, IL Aug 2024–Present
University of California, Berkeley B.S. in Electrical Engineering and Computer Sciences Research Advisor: Dr. Gireeja Ranade	Berkeley, CA Aug 2020–May 2024

RESEARCH INTERESTS

Machine Learning Education, Human-AI Interaction, Broadening Participation in Computing

PUBLICATIONS

Asterisks (*) denote co-first authorship. Daggers (†) denote mentorship.

4. **B. Agyare**, S. Jin[†], M. Acosta, C. Lewis. “Why Some Students Still Opt Out of CS: Student Perspectives in a Culturally Responsive Program.” *ACM Technical Symposium on Computer Science Education (SIGCSE)*, 2026.
3. C. Perdriau, **B. Agyare**, C. Lewis. “Extracurricular Activities Predict CS Internship Attainment.” *ACM Technical Symposium on Computer Science Education (SIGCSE)*, 2026.
2. **B. Agyare***, M. Patel*, A. Matsumoto, G. Ranade. “Broadening Participation in CS Research with Scalable Undergraduate Research Mini-Projects.” *IEEE Frontiers in Education Conference (FIE)*, 2025.
1. **B. Agyare**, A. Matsumoto, M. Patel, G. Ranade. “Student Feedback on Opt-in, Inclusive, Course-Integrated Study Groups.” *IEEE Frontiers in Education Conference (FIE)*, 2023.

WORK EXPERIENCE

- **Adobe Research**, *Research Scientist Intern* May 2026–Aug 2026
— Designed and evaluated an AI-augmented interface for metacognitive support in academic reading.
Research Mentors: Dr. Franck Dernoncourt, Dr. Viet Lai
- **IBM T.J. Watson Research Center**, *Research Software Engineering Intern* May 2024–Aug 2024
— Integrated the Mamba deep learning architecture into a research codebase for optimized AI inference using Python and PyTorch.
- **Microsoft**, *Software Engineering Intern* May 2023–Aug 2023
— Developed storage resiliency measures for virtual storage spaces in Windows using C++.
- **Google**, *Student Training in Engineering Program Intern* May 2022–Aug 2022
— Developed features for Google’s internal code review tool using Go, SQL, and HTML.
- **Lawrence Berkeley National Laboratory**, *Research Intern* May 2021–Dec 2021
— Implemented graph algorithms for complex network analysis.
Research Mentors: Dr. Katherine Yelick, Dr. Benjamin Brock, Dr. Giulia Guidi

AWARDS

- Facilitating Learning Excellence Award, UIUC 2026
- National GEM Consortium Ph.D. Fellowship 2024
- Outstanding Graduate Student Instructor Award, UC Berkeley 2023

TEACHING

- **CS 307: Modeling and Learning in Data Science**, UIUC Fall 2025–Spring 2026
 - *Head Teaching Assistant* (Spring 2026); *Teaching Assistant* (Fall 2025)
 - Developed discussion materials, including practice problems and content review lectures, covering machine learning and data science concepts.
 - Led weekly discussion sections for ~100 undergraduate students and hosted weekly office hours.
 - As Head TA, graded lab reports, answered student questions online and via email, and supported course logistics.
 - **Foundations of Machine Learning**, Break Through Tech AI Program Summer 2025
 - *Lab Instructor*
 - Developed lecture materials and led nine weeks of virtual instruction for 50 undergraduate students.
 - Hosted weekly office hours and graded lab assignments and written reports.
 - **EECS 16B: Designing Information Devices and Systems II**, UC Berkeley Fall 2021–Spring 2023
 - *Head Teaching Assistant* (Spring 2022, Fall 2022, Spring 2023); *Tutor* (Fall 2021)
 - Supported instruction in linear algebra, circuit analysis, and applications to machine learning, including singular value decomposition and principal component analysis.
 - As Head TA, worked with faculty on course logistics, managed a staff of ~40 TAs, and supported courses with enrollments of 1100, 200, and 400 students.
 - As a Tutor, staffed office hours and maintained course software infrastructure.
- Guest Lectures:**
- INFO 102: Little Bits to Big Ideas, UIUC Spring 2025
 - Delivered a guest lecture introducing the technical foundations of ChatGPT and large language models to a general undergraduate audience.

POSTERS

- p3. **B. Agyare**, M. Patel, A. Matsumoto, and G. Ranade, “Broadening Participation in CS Research with Scalable Undergraduate Research Mini-Projects,” *Proceedings of the 56th ACM Technical Symposium on Computer Science Education V. 2 (SIGCSE TS 2025)*, ACM, Pittsburgh, PA, pp. 1355–1356, 2025.
- p2. 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.
- p1. 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.

PRESENTATIONS AND TALKS

Panels, Presentations, and Public Speaking:

- **Student Speaker**, Student Voices in Action: AiiCE Student Advisory Board Feb. 2026
 - *Hosted by the Alliance for Identity-Inclusive Computing Education Lecture Series*

- **Panel Moderator**, Toward a more Equitable and Inclusive Future: Student Insights Oct. 2024
Hosted by the Alliance for Identity-Inclusive Computing Education Lecture Series
- **Student Speaker**, Joint California Summit on Generative AI May 2024
Hosted by UC Berkeley CDSS, Stanford HAI, and the California Governor's Office
- **Panelist**, Considering Identity & Inclusion in Computing Spaces Jan. 2024
Hosted by the Alliance for Identity-Inclusive Computing Education Lecture Series
- **Student Speaker**, Joseph T. Gier Memorial Sculpture Dedication Ceremony Sept. 2023
Hosted by UC Berkeley
- **Presenter**, EECS Undergraduate Student Survey Presentation: Diversity in the Department Mar. 2023
At UC Berkeley EECS Faculty Retreat

Talks:

- **Understanding High School Students' Experiences Learning CS in a Culturally Responsive Computing Program** Apr. 2025
CRA Grad Cohort for IDEALS Workshop
- **Scalable Undergraduate Research Mini-Projects in a Gateway AI Course** Mar. 2024
AAAI Symposium on Increasing Diversity in AI Education and Research
- **Student Feedback on Opt-in, Inclusive, Course-Integrated Study Groups** Dec. 2023
UC Berkeley, Algorithms & Computing for Education (ACE) Lab
- **Inclusive Study Group Formation At Scale** Oct. 2022, Mar. 2023
UC Berkeley, CS 375: Teaching Techniques for Computer Science

LEADERSHIP AND OUTREACH

- **Graduate Affairs Director**, Black, Indigenous, and Latino in Tech, UIUC 2026–Present
- **Graduate Student Ambassador**, Grainger College of Engineering, UIUC 2025–Present
Mentor first-year graduate students, participate in recruitment and advising panels, and organize events supporting graduate student success.
- **Student Advisory Board Member**, Alliance for Identity-Inclusive Computing Education, Duke 2022–2026
- **Guest Presenter**, Girls Who Code (Local Chapter) Mar. 2025
- **Panelist**, Women in Technology Panel: Black, Indigenous, and Latino in Tech, UIUC Mar. 2025
- **Mentor**, Graduate Society of Women Engineers (GradSWE) Undergraduate Mentoring Program, UIUC 2024–2025
- **President**, Black Engineering and Science Student Association (BESSA), UC Berkeley's NSBE Chapter 2023–2024
Previous: External Vice President (2022-2023), Pre-Collegiate Initiative Chair (2021-2022)
- **Committee Member**, EECS Department Student Anti-Racism Committee, UC Berkeley Jan.–May 2022
- **All About STEM Day Organizer**, BESSA Pre-Collegiate Programming Workshops Mar. 2021, Mar. 2022
*2022: Raised \$20,000 to lead a robotics workshop for high school students in the Bay Area.
2021: Helped organize and teach a virtual data science workshop for K-12 students.*

ACADEMIC SERVICE

Reviewing:

- SIGCSE 2027, 2026
- RESPECT 2026

Research Mentorship:

- Han Dang, UIC Undergraduate, 2026–Present
- Ritsika Medury, UIUC Undergraduate, 2026–Present
- Skyla Jin, UIUC Undergraduate, 2024–2025

SKILLS

- **Programming Languages:** Python (NumPy, Pandas, PyTorch), Java, C++, C, Go, SQL
- **Graduate Coursework:** Natural Language Processing, Computational Social Science, Foundations of CS Education Research, Statistical Inference in Education, Software Engineering with LLM Agents
- **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