Randi C. Williams

randi@randiwilliams.com

SUMMARY

AI and Education researcher, full stack software engineer with 8+ years' experience leading high-impact AI education projects. Expertise in empirical and design-based research, with publications in top HCI and CS Education venues. Passionate about expanding access to AI through interactive learning experiences.

PROFESSIONAL EXPERIENCE

Day of AI, Cambridge, MA — January 2025 – Present
Research Lead, direct report to President Ethan Berman
- Spearhead K-12 AI education research and outreach, driving program growth through strategic partnerships and engagement
- Engage in research evaluation to identify and communicate AI education best practices, assessing curriculum impact and informing program strategy

Algorithmic Justice League, Cambridge, MA — March 2024 – January 2025
Program Manager
- Created and presented accessible materials on complex AI topics for quarterly events with 600+ attendees, fostering understanding of AI's societal impact and facilitating meaningful dialogue
- Expanded organizational reach through research-driven media creation and stakeholder consulting

MIT Media Lab, Personal Robots Group, Cambridge, MA — September 2016 – January 2024
Graduate Research Assistant advised by Prof. Cynthia Breazeal
Led the development of open-source interactive robot and online AI programming platforms (>1,000 users worldwide) expanding worldwide access to AI education
- Provided ongoing support to program training 10,000+ K-12 educators to teach hands-on AI + ethics

Microsoft Research, Research in Software Engineering (RiSE), Seattle, WA — Summer 2021
Graduate Research Intern supervised by Dr. Michał Moskal
- Built novel programming platform to train then deploy machine learning models on microcontrollers

MIT Lincoln Laboratories, Informatics and Decision Support Group, Lexington, MA — Summer 2016
Graduate Research Intern supervised by Dr. Jason Thornton
- Refactored computer vision system, achieving measurable improvements in accuracy and usability

UMBC, ECLIPSE Research Cluster, Catonsville, MD — August 2014 to May 2016
Undergraduate Researcher supervised by Dr. Nilanjan Banerjee
- Prototyped and tested a smart-textile wearable to diagnose Restless Leg Syndrome

MIT Media Lab, Fluid Interfaces Group, Cambridge, MA — Summer 2015
Undergraduate Research Intern supervised by Dr. Niaja Farve and Dr. Pattie Maes
- Prototyped app that automatically records and displays activity tracking data from mobile devices

NASA Jet Propulsion Lab, Human-Robot Interfaces Group, La Cañada Flintridge, CA — Summer 2014
Undergraduate Research Intern supervised by Dr. Adrian Stoica
- Prototyped a text-to-speech and voice command system and virtual testbed for quadrotor teams

Randi C. Williams

randi@randiwilliams.com

TEACHING EXPERIENCE

Semester-long courses, Teaching assistant

MIT Educational Justice Initiative (TEJI) and CSAIL, Cambridge, MA — Summer 2022
Brave Behind Bars Intro to Computer Science taught by Marisa Gaetz, Martin Nisser, and Dr. Emily Harburg

- Co-taught introduction to JavaScript, supported students' projects, led office hours

MIT Program in Media Arts and Sciences and EECS, Cambridge, MA — Spring 2019 & 2020
Democratizing AI through K-12 AI Education for All taught by Profs. Cynthia Breazeal and Hal Abelson

- Planned content for new project-based course for undergrad and graduate students
- Ignited students' learning through project advising, design critiques, class discussions, and office hours

Extended workshops, Instructor

MIT MISTI and The English Institute, Santiago, Chile — January 2024
Intro to Computer Science, Early College and High School

- Designed and delivered theoretical and hands-on lectures in English and Spanish for project-based introduction to Python course

MIT MISTI and Monterrey Institute of Technology CS&T, Puebla, MX — Summer 2018
Beautiful Patterns Intro to Computer Science organized by Dr. Abel Sanchez

- Designed and delivered hands-on, unplugged lectures and computer lab instruction in English and Spanish for project-based introductory computer science course for high school girls

Center for Infants and Youth, Parque la Libertad, San José, Costa Rica — Summer 2018
PrimaryAI, K-2nd Grade AI Workshop

- Designed and delivered hands-on lectures (Spanish) for introductory AI and robotics course for elementary school youth

Guest Lectures: Georgia Tech CS.4660 Educational Technology (Spring 2024), Harvard T022 How the Future of Work is Shaping the Future of Education (Spring 2020- Spring 2024), MIT 6.S062/MAS.S10 Generative AI in K-12 Education (Fall 2023), Harvard T217 Designing K–12 Computer Science Learning Experiences (Spring 2023)

EDUCATION

Massachusetts Institute of Technology (MIT), Cambridge, MA
Doctor of Philosophy in Media, Arts, and Sciences, 5.0/5.0 GPA — February 2024
Kaufman Teaching Certificate — December 2022
Dissertation: "Impact.AI: Democratizing AI through K-12 Artificial Intelligence Education"
Committee: Dr. Cynthia Breazeal (advisor, MIT), Dr. Hal Abelson (MIT)
Dr. Tia C. Madkins (UT Austin), Dr. Jean Ryoo (UCLA)

Master of Science in Media, Arts, and Sciences, 5.0/5.0 GPA — May 2018
Thesis: "PopBots: Leveraging Social Robots to Aid Preschool Children's AI Education"
Committee: Dr. Cynthia Breazeal (advisor, MIT), Dr. Marina Bers (Tufts)
Dr. Paul Harris (Harvard)

University of Maryland, Baltimore County (UMBC), Baltimore, MD
Bachelor of Science in Computer Engineering, 3.977/4.0 GPA — May 2016

Randi C. Williams

randi@randiwilliams.com

RESEARCH FELLOWSHIPS AND GRANTS

- Microsoft Research PhD Fellow (10 recipients out of 500 applications) 2021
- LEGO Papert Fellow, MIT Media Lab (3 recipients, nominated by faculty) 2019
- National Science Foundation, Graduate Research Fellow (2,000 out of 10,000 applicants) 2018
- MIT Ida Green Fellow 2016
- National GEM Consortium Fellow 2016

HONORS AND AWARDS

- Computer Science Ed Week CS Hero (nominated by CSTA board) 2023
- Cambridge Science Festival Curious Scientist of the Year (1 recipient, nominated by city) 2021
- MIT Graduate Woman of Excellence 2019
- MIT Unsung Hero (1 recipient, nominated by peers) 2019

PEER-REVIEWED PUBLICATIONS

Areas of contribution: AI Education, AI Literacy, Human-Computer Interaction
Google Scholar citations = 1852, h-index: 15, i10-index: 17

Journals

- Randi Williams, Safinah Ali, Nisha Devasia, Daniella DiPaola, Jenna Hong, Stephen P. Kaputsos, Brian Jordan, and Cynthia Breazeal. 2022. AI + ethics curricula for middle school youth: lessons learned from three project-based curricula. International Journal of Artificial Intelligence in Education.

Conference Proceedings

- Randi Williams*, Safinah Ali*, Raul Alcantara, Tasneem Burghleh, Sharifa Alghowinem, Cynthia Breazeal. 2024. Doodlebot: An Educational Robot for Creativity and AI Literacy. In Proceedings of the 2024 ACM/IEEE International Conference on Human-Robot Interaction (HRI '24).
- Randi Williams. 2024. Dr. R.O. Bott Will See You Now: Exploring AI for Wellbeing with Middle School Students. In Proceedings of the 13th Symposium on Education Advances in Artificial Intelligence (EAAI '24). AAAI, Menlo Park, Ca, USA.
- Safinah Ali, Prerna Ravi, Randi Williams, Daniella DiPaola, Cynthia Breazeal. Constructing Dreams Using Generative AI. In Proceedings of the 13th Symposium on Education Advances in Artificial Intelligence (EAAI '24). AAAI, Menlo Park, Ca, USA.
- David Kim, Prerna Ravi, Daeun Yoo, Randi Williams. 2024. App Planner: Utilizing Generative AI in K-12 Mobile App Development Education. In Proceedings of the 16th ACM SIGCHI Interaction Design and Children (IDC) Conference, ACM.
- Randi Williams. 2022. Constructionism, Ethics, and Creativity: Developing Tools for the Future of Education with AI. In Proceedings of the 2022 IEEE Symposium on Visual Languages and Human-Centric Computing (IEEE VL/HCC '22).
- Tejal Reddy, Randi Williams, and Cynthia Breazeal. 2022. LevelUp: Automatic assessment of block-based machine learning projects for AI education. In Proceedings of the 2022 IEEE Symposium on Visual Languages and Human-Centric Computing (IEEE VL/HCC '22). * *Best paper award* *
- Randi Williams, Michal Moskał, and Peli de Halleux. 2022. ML Blocks: A block-based, graphical user interface for creating TinyML models. In Proceedings of the 2022 IEEE Symposium on Visual Languages and Human-Centric Computing (IEEE VL/HCC '22).
- Tejal Reddy, Randi Williams, Cynthia Breazeal. 2021. Text Classification for AI Education. In Proceedings of the 52nd ACM Technical Symposium on Computer Science Education (SIGCSE'21). * *Won first place in ACM undergraduate student research competition.* *

Conference Proceedings (cntd.)

- Randi Williams. 2021. How to Train Your Robot: Project-Based AI Education for Middle School Classrooms. In Proceedings of the 52nd ACM Technical Symposium on Computer Science Education (SIGCSE'21).
- Brian Jordan, Nisha Devasia, Jenna Hong, Randi Williams, Cynthia Breazeal. 2021. PoseBlocks: A Toolkit for Creating (and Dancing) with AI. In Proceedings of the 10th Symposium on Education Advances in Artificial Intelligence (EAAI '21). AAAI, Menlo Park, CA, USA. *Supervised graduate/undergraduate team who took MAS.S65 course.*
- Randi Williams, Stephen P. Kaputsos, Cynthia Breazeal. 2021. Teacher Perspectives on How to Train Your Robot, A Middle School AI and Ethics Curriculum. In Proceedings of the 10th Symposium on Education Advances in Artificial Intelligence (EAAI '21). AAAI, Menlo Park, CA, USA.
- Phoebe Lin, Jessica Van Brummelen, Galit Lukin, Randi Williams, Cynthia Breazeal. 2020. Zhorai: Designing A Conversational Agent for Children to Explore Machine Learning Concepts. In Proceedings of the 9th Symposium on Education Advances in Artificial Intelligence (EAAI '20). AAAI, Menlo Park, CA, USA. *Supervised graduate/undergraduate team who took MAS.S65 course.*
- Randi Williams, Hae Won Park, and Cynthia Breazeal. 2019. A is for Artificial Intelligence. In Proceedings of the 2019 Conference on Human Factors in Computing (CHI '19). ACM, New York, USA.
- Randi Williams, Hae Won Park, Lauren Oh, and Cynthia Breazeal. 2019. PopBots: Designing an Artificial Intelligence Curriculum for Early Childhood Education. In Proceedings of the 9th Symposium on Education Advances in Artificial Intelligence (EAAI '19). AAAI, Menlo Park, CA, USA.
- Jacqueline M. Kory-Westlund, J. M., Hae Won Park, Randi Williams, and Cynthia Breazeal. 2018. Measuring Young Children's Long-term Relationships with Social Robots. In Proceedings of the 17th ACM Interaction Design and Children Conference (IDC) (pp. 207-218). ACM: New York, NY.
- Stefania Druga, Randi Williams, Hae Won Park, and Cynthia Breazeal. 2018. How smart are the smart toys?: children and parents' agent interaction and intelligence attribution. In Proceedings of the 17th ACM Conference on Interaction Design and Children (IDC '18). ACM, New York, NY, USA, 231-240. DOI: https://doi.org/10.1145/3202185.3202741.
- Randi Williams, Christian Vázquez Machado, Stefania Druga, Cynthia Breazeal, and Pattie Maes. 2018. "My doll says it's ok": a study of children's conformity to a talking doll. In Proceedings of the 17th ACM Conference on Interaction Design and Children (IDC '18). ACM, New York, NY, USA, 625-631. DOI: https://doi.org/10.1145/3202185.3210788.
- Randi Williams*, Stefania Druga*, Mitch Resnick, and Cynthia Breazeal. 2017. "Hey Google, is it OK if I Eat You?": Initial Explorations in Child-Agent Interaction. In Proceedings of the 16th ACM SIGCHI Interaction Design and Children (IDC) Conference, ACM.

INVITED TALKS AND WORKSHOP PRESENTATIONS

- Randi Williams. 2025. La IA Es Para Todos: Reimaginando la educación para un mundo impulsado por la Inteligencia Artificial. Keynote address at Ceibal Escuela de Verano. Montevideo, Uruguay.
- Randi Williams. 2024. Developing Tools for the Future of Education with AI. Invited talk at Carnegie Mellon Human Computer Interaction Institute Seminar. Pittsburgh, Pennsylvania.
- Randi Williams. 2024. ImpactAI: Inclusive AI Education to Empower Future Generations. Invited talk at Harvard Graduate School of Education Seminar. Cambridge, MA.
- Randi Williams. 2024. Conceptualizing Tools for the Future of Education with AI. Invited talk at Georgia Tech's Interactive Computing Seminar. Atlanta, Georgia.
- Randi Williams, Eden Wilson, Jennifer Rosato. 2024. Panel at CSTA's 20th Anniversary Celebrating Computer Science Education Week. Virtual.
- Randi Williams and Davinia Hernandez-Leo. 2024. Impact. AI: democratizing artificial intelligence through education. Keynote address at the 9th Annual STEAMConf Barcelona. Barcelona, Spain.

Invited Talks (cntd.)

- Randi Williams. 2024. Ethical Considerations for Justice-Oriented AI Instruction: Supporting Teachers' and Students' Learning. Invited talk at the American Educational Research Association (AERA) VP Session Black Women Centering Equity as Justice in STEM Teaching and Learning: Considerations for the Field. Philadelphia, PA, USA.
- Randi Williams. 2024. Facing the Coded Gaze. Workshop facilitator at 3rd Annual Innovators for Purpose Summit, Transforming AI. Cambridge, MA, USA.
- Randi Williams, Bernardo Garcia Bulle Bueno, Salome Aguilar Llanes, Claudia Urrea (moderator). 2024. AI in Action: Advantages and Tradeoffs. Panel member at Jameel World Education Lab J-WEL Week. Cambridge, MA, USA.
- Randi Williams. 2023. Designing with Sparki, An interactive agent for K-12 AI education. Invited talk at MIT Generative AI Week 2023. Cambridge, MA, USA.
- Randi Williams. 2023. Impact.AI: Designing K-12 Artificial Intelligence (AI) Education to Empower Technosocial Change Agents. Invited talk at University at Buffalo for the VITAL Scholars Seminar series. Buffalo, NY, USA
- Randi Williams. 2023. Paths of exploration around Youth, AI, Policy, and Advocacy. Invited talk at the Kids & AI summit at the MIT Media Lab. Cambridge, MA, USA.
- Randi Williams and Cynthia Breazeal. 2023. Assessments for K-12 AI Literacy: A Comprehensive Review. Oral presentation at the AIED in K-12 Workshop at AIED. Virtual symposium.
- Randi Williams. 2022. Middle school AI + science: The micro:biome. Invited talk at the Computer Science Teacher's Association (CSTA) CS Across the Curriculum Summit 2022. Virtual symposium.
- Randi Williams and Andy Lippman. 2021. The Soul of a Robot. Oral presentation at the Emerging Technologies (EmTech MIT) Conference. Cambridge, MA, USA.
- Randi Williams. 2021. How to train your robot: Envisioning the future of education with AI. Invited talk at the Harvard Center for Research on Computation and Society, Rising Stars in AI for Social Good research series. Cambridge, MA, USA.
- Randi Williams. 2020. How to train your robot: Artifacts and curricula for grade school AI education. Oral presentation at the Arizona State University + Global Silicon Valley (ASUGSV) Summit 2020. San Diego, CA, USA.
- Randi Williams. 2020. Empowering children with (AI) education. Oral presentation at the 2020 AI Latin American sumMIT. Cambridge, MA, USA.
- Randi Williams and Cynthia Breazeal. 2020. How to Train Your Robot: A Middle School AI and Ethics Curriculum. Oral presentation at the International Workshop on Education in Artificial Intelligence K-12 (EDUAI '20).
- Randi Williams*, Safinah Ali*, Blakeley H. Payne*, Hae Won Park, and Cynthia Breazeal. 2019. Constructionism, Ethics, and Creativity: Developing Primary and Middle School Artificial Intelligence Education. Oral presentation at the International Workshop on Education in Artificial Intelligence K-12 (EDUAI '19). Palo Alto, CA, USA.
- Randi Williams, Cynthia Breazeal. 2018. PopBots: Leveraging social robots to aid early childhood artificial intelligence education. Oral presentation at the Black in AI workshop. Montréal, Canada.

PROFESSIONAL SERVICE

▪ Black in Robotics, Boston Chapter Co-director	2021 – 2024
▪ Black in AI Research (BlackAIR) Summer Research Mentor	2021
▪ MIT Graduate Student Council, Diversity Conduit	2018 – 2021
▪ MIT Media Lab Culture Working Group, Member	2019 – 2020
▪ IBM Watson AI XPRIZE Judge	2019 – 2020
▪ MIT Graduate Student of Color Advisory Council, Member	2018 – 2020

Professional Service (cntd.)

Reviewer for: International Journal of Artificial Intelligence in Education (2020-2022), Information and Learning Sciences (ILS 2022), Social Behavior and Personality Journal (2022), Conference on Human Factors in Computing (CHI 2020-2022), Black in AI Workshop (2019-2021), Human-Robot Interaction (HRI 2020, 2023), International Symposium on Robot and Human Interactive Communication (RO-MAN 2020)

EXTRACURRICULAR ACTIVITIES

- MIT Graduate Resident Assistant (RA) 2018 – 2023
- MIT Academy of Courageous Minority Engineers; Treasurer, President 2018 – 2020
- MIT MISTI – JayNii Streetwise Orphanage, Volunteer – Accra, Ghana Summer 2019
- MIT Summer Research Program, Pod Leader Summer 2018

One-off workshops to broaden participation in Computer Science / AI:

2025: Coolidge Theater Coded Bias Seminar

2024: Cambridge Mayor's Summer Youth Program Community Partner, Break Through Tech Unmasking AI Workshop, Innovators for Purpose Teen AI Summit, Innovators for Purpose Smart Cars AI: Ethics and Fairness

2023: Boston Museum of Science Engineers Week Speaker, The Possible Zone Reinforcement Learning Deep Dive Facilitator, Innovators for Purpose Generative AI Workshop Leader

2022: MIT High School Summer Program Workshop Leader

2021: Queen Liliuokalani Trust Center Future Makers Workshop

2019: Career Girls Role Model, Girls who Code Workshop Leader, Mujeres + Tech STEM Workshop Leader

2018: Brains On! Cambridge Science Festival - Panelist

2017: Cambridge Science Festival Robot Zoo – Participant (through 2022), MAES Science Extravaganza Speaker MIT Scratch Day Workshop Leader