

# Randi C. Williams

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20 Ames St, Cambridge, MA 02139

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## PROFILE

I am a researcher and educator working on impactful, ambitious research projects in emerging technologies (artificial intelligence, social robotics, embedded systems). My background in Computer Science, Engineering, and Human-Computer Interaction powers my work in responsible AI for social good, socially assistive robotics, and K-12 education.

## Core skills:

- Web/Mobile Development: Android, HTML/CSS, JavaScript/TypeScript, React, Node.js
- Software Development: Java, Python, C/C++
- Hardware Development and Fabrication: Arduino, PCB Fabrication, C
- Machine Learning/Data Science: Tensorflow, SKLearn, Keras, MATLAB

## RESEARCH & TEACHING EXPERIENCE

MIT Media Lab, Personal Robots Group – Cambridge, MA – September 2016 – Present

Graduate Research Assistant under Dr. Cynthia Breazeal

Master's Thesis: "PopBots: Leveraging Social Robots to Aid Preschool Children's AI Education"

- Ideation-to-working prototype developer of interactive, education robots
- Ideation-to-deployment developer of web-based AI programming platforms
- Analyzing and modeling student behavior data in educational platforms
- Developing and testing hands-on AI + ethics curricula for PreK-12 students
- Interfacing with organizations and direct stakeholders to understand technology needs

Microsoft Research, Research in Software Engineering (RISE) – Summer 2021

Graduate Research Intern under Dr. Michał Moskal

- Ideation-to-working prototype developer of web-based, TinyML training platform

Democratizing AI through K-12 AI Education for All – MIT – Spring 2019-2020

Teaching Assistant under Profs. Cynthia Breazeal and Hal Abelson

- Lecturing, assigning homework, grading, and advising under/graduate student projects

MIT Lincoln Lab, Informatics and Decision Support Group – Lexington, MA – Summer 2016

Graduate Research Intern under Dr. Jason Thornton

- Improving and evaluating machine learning system for human-decision making support

## EDUCATION

Massachusetts Institute of Technology (MIT), Cambridge, MA

Doctor of Philosophy in Media, Arts, and Sciences, 5.0/5.0 GPA

Master of Science in Media, Arts, and Sciences, 5.0/5.0 GPA

*Expected May 2023*

May 2018

University of Maryland, Baltimore County (UMBC), Baltimore, MD

Bachelor of Science in Computer Engineering, 3.977/4.0 GPA

May 2016

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## FELLOWSHIPS AND AWARDS

- Microsoft Research PhD Fellow 2021
- LEGO Papert Fellow, MIT Media Lab 2019
- National Science Foundation, Graduate Research Fellow 2018
- Cambridge Science Festival Curious Scientist of the Year 2021

## SELECTED PEER-REVIEWED PUBLICATIONS

- [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*.
- [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)*. *Supervised undergraduate research assistant*.
- [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.
- [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, NY, USA.
- [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. *Proceedings of the 16th ACM SIGCHI Interaction Design and Children (IDC) Conference*, ACM.

## PROFESSIONAL SERVICE

### MIT

- MIT Media Lab Culture Working Group 2019 – 2020
- MIT Graduate Student Council, Diversity Conduit 2018 – 2021
- MIT Graduate Student of Color Advisory Council 2018 – 2020

### External

- Black in Robotics, Boston Chapter Director 2021 – Present
  - Black in AI Research (BlackAIR) Summer Research Mentor 2021
  - IBM Watson AI XPRIZE Judge 2019 – 2020
- Reviewer for: *Black in AI Workshop (2019-2021)*, *Conference on Human Factors in Computing (CHI 2020-2022)*, *Human-Robot Interaction (HRI 2020)*, *Information and Learning Sciences (ILS 2022)*, *International Journal of Artificial Intelligence in Education (2020-2022)*, *Social Behavior and Personality Journal (2022)*, *Symposium on Robot and Human Interactive Communication (RO-MAN 2020)*