Safinah Ali

Assistant Professor, New York University (NYU) Steinhardt

safinah.ali@nyu.edu | safinah@mit.edu | safinahali.github.io

ACADEMIC APPOINTMENT

Assistant Professor — January 2025 - present
Education Communication and Technology Program, NYU Steinhardt
New York University, New York City, NY, USA

EDUCATION

Ph.D., Media Arts and Sciences — September 2019 - December 2024
Massachusetts Institute of Technology, Cambridge, MA, USA

M.S., Media Arts and Sciences — September 2017 - August 2019
Massachusetts Institute of Technology, Cambridge, MA, USA

M.HCI., Human-Computer Interaction — August 2015 - August 2016
Carnegie Mellon University, Pittsburgh, PA, USA

B.Des, Design — 2011 - 2015
Indian Institute of Technology Guwahati, Assam, India

RESEARCH OVERVIEW

Designing accessible creativity support technology, to empower all children with powerful modes of creation, while helping them be responsible creators, thinkers and citizens in an AI-driven future. Working at the intersection of the fields of Learning Sciences, Co-creativity, Human-robot Interaction (HRI), Artificial Intelligence (AI), and Human-computer Interaction (HCI).

PUBLICATIONS
JOURNAL PAPERS

Rabinowitz, G., Moore, K. S., **Ali, S.**, Weckel, M., Lee, I., Gupta, P., & Chaffee, R. (2025). Study of an effective machine learning-integrated science curriculum for high school youth in an informal learning setting. *International Journal of STEM Education, 12(1), 23.*

Shen, J., DiPaola, D., **Ali, S.**, Sap, M., Park, H. W., & Breazeal, C. (2024). Empathy Toward Artificial Intelligence Versus Human Experiences and the Role of Transparency. *Mental Health and Social Support Chatbot Design: Comparative Study. JMIR Mental Health, 11(1), e62679.*

Williams, R., **Ali, S.**, Devasia, N., DiPaola, D., ... & Breazeal, C. (2022). AI+ ethics curricula for middle school youth: Lessons learned from three project-based curricula. *International Journal of Artificial Intelligence in Education, 1-59.*

Zhang, H., Lee, I., **Ali, S.**, DiPaola, D., Cheng, Y., & Breazeal, C. (2022). Integrating ethics and career futures with technical learning to promote AI literacy for middle school students: An exploratory study. *International Journal of Artificial Intelligence in Education, 1-35.*

Ali, S., DiPaola, D., Lee, I., Sindato, V., Kim, G., Blumofe, R., & Breazeal, C. (2021). Children as creators, thinkers and citizens in an AI-driven future. *Computers and Education: Artificial Intelligence, 2, 100040.*

Ali, S., Devasia, N., Park, H. W., & Breazeal, C. (2021). Social Robots as Creativity Eliciting Agents. *Frontiers in Robotics and AI, , 8, 673730.*

Ali, S., Park, H. W., & Breazeal, C. (2021). A social robot's influence on children's figural creativity during gameplay. *International Journal of Child-Computer Interaction, 28, 100234.*

Rosenberg, M., Park, H. W., Rosenberg-Kima, R., **Ali, S.,** Ostrowski, A. K., Breazeal, C., & Gordon, G. (2021). Expressive Cognitive Architecture for a Curious Social Robot. *ACM Transactions on Interactive Intelligent Systems (TiiS), 11(2), 1-25.*

PEER-REVIEWED CONFERENCE PROCEEDINGS

Ali, S. (2025) Designing AI Tools to Support Art Learning: A Case Study of Four AI Tools to Support Creative Inquiry. *Proceedings of the Constructionism Conference 2025.*

Ali, S., Jakubowicz, S., Abodayeh, A., Zubairi, A., Aldossary, D., Breazeal, C. (2025). Character Design as an Art & AI Lesson. *Proceedings of the AAAI Conference on Artificial Intelligence 2025.*

Ali, S., Abodayeh, A., Dhuliawala, Z., Breazeal, C., Park, H. (2025). Towards Inclusive Co-creative Child-robot Interaction: Can Social Robots Support Neurodivergent Children's Creativity? *Proceedings of the ACM/IEEE International Conference on Human-Robot Interaction 2025.*

Ali, S.*, Williams, R.*, Alcantara, R., Burghleh, T., Alghowinem, S., Breazeal, C. (2024). Doodlebot: An Educational Robot for Creativity and AI Literacy. *Proceedings of the ACM/IEEE International Conference on Human-Robot Interaction 2024. (*equal contribution)*

F. Hollands, D. DiPaola, Breazeal, C., **Ali, S.** (2024). AI Mastery May Not Be For Everyone, But AI Literacy Should Be. *Proceedings of the 2024 on ACM Virtual Global Computing Education Conference V. 1 (pp. 60-66).*

Ali, S., Ravi, P., Moore, K., Abelson, H., Breazeal, C. (2024). A Picture is Worth a Thousand Words: Co-designing Text-to-image Generation Learning Materials for K-12 with Educators. *Proceedings of the AAAI Conference on Artificial Intelligence 2024.*

Ali, S., Ravi, P., Williams, R., Dipaola, D., Breazeal, C. (2024). Constructing Dreams using Generative AI. *Proceedings of the AAAI Conference on Artificial Intelligence 2024.*

Moore, K. S., **Ali, S.,** Lee, I., Weckel, M., Gupta, P., Rabinowitz, G., & Chaffee, R. (2024). A Quasi-Experimental Study of the Introduction of Machine Learning Concepts to a High School Age Audience as Part of a Mentored Scientific Research Program. *Proceedings of the 18th International Conference of the Learning Sciences-ICLS 2024, pp. 2321-2322. International Society of the Learning Sciences.*

Ali, S., Kumar, V, Breazeal, C. (2023). AI-Audit. A Card Game to Reflect on Everyday AI Systems. *Thirteenth AAAI Symposium on Educational Advances in Artificial Intelligence (EAAI-23)*

DiPaola, D., Moore, K. S., **Ali, S.,** Perret, B., Zhou, X., Zhang, H., & Lee, I. (2023, March). Make-a-Thon for Middle School AI Educators. *Proceedings of the 54th ACM Technical Symposium on Computer Science Education V. 1 (pp. 305-311).*

Walsh, B., **Ali, S.,** Castro, F., Desportes, K., DiPaola, D., Lee, I., ... & Zhang, H. (2022, March). Making Art with and about Artificial Intelligence: Three Approaches to Teaching AI and AI Ethics to Middle and High School Students. *Proceedings of the 53rd ACM Technical Symposium on Computer Science Education V. 2 (pp. 1203-1205).*

Lyu, Z., **Ali, S.,** & Breazeal, C. (2022). Introducing Variational Autoencoders to High School Students. *Twelfth AAAI Symposium on Educational Advances in Artificial Intelligence (EAAI-22)*

Ali, S., Devasia, N. E., & Breazeal, C. (2022). Escape! bot: Social robots as creative problem-solving partners. *Creativity and Cognition (pp. 275-283).*

Ali, S.*, DiPaola*, D., Lee, I., Hong, J., & Breazeal, C. (2021). Exploring Generative Models with Middle School Students. *Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems (pp. 1-13).* *(*equal contribution)*

Ali, S., Park, H. W., & Breazeal, C. (2020). Can Children Emulate a Robotic Non-Player Character's Figural Creativity?. *Proceedings of the Annual Symposium on Computer-Human Interaction in Play (pp. 499-509).*

Lee, I., **Ali, S.,** Zhang, H., DiPaola, D., Breazeal, C. (2020). Developing Middle School Students' AI Literacy. *Proceedings of the 52nd ACM technical symposium on computer science education (SIGCSE).*

Ali, S., DiPaola, D., & Breazeal, C. (2021). What are GANs?: Introducing generative adversarial networks to middle school students. *Proceedings of the AAAI Conference on Artificial Intelligence.*

Ali, S., Lee, I. (2021). The Contour to Classification Game: An Introduction to Neural Networks. *Proceedings of the AAAI Conference on Artificial Intelligence.*

Ali S., Muralidharan L., Alfieri F., Agrawal M., Jorgensen J. (2019) Sonify: Making Visual Graphs Accessible. In: Ahram T., Taiar R., Colson S., Choplin A. (eds) *Human Interaction and Emerging Technologies. IHIET 2019. Advances in Intelligent Systems and Computing*

Ali, S., Williams, R., Payne B., Park H., Breazeal C. (2019) Constructionism, Ethics, and Creativity: Developing Primary and Middle School Artificial Intelligence. *Proceedings of International Joint Conferences on Artificial Intelligence 2019.*

Ali, S., Moroso, T., Breazeal, C. (2019). Can Children Learn Creativity from a Social Robot? In *Proceedings of ACM Creativity and Cognition 2019.*

Holmes, J., To, A., Zhang, F., **Ali, S.,** Bai, Z., ... & Hammer, J.. (2019). A Good Scare: Leveraging Game Theming and Narrative to Impact Player Experience. *Proceedings of 2019 CHI Conference on Human Factors in Computing Systems.*

Spaulding, S., Chen, H., **Ali, S.,** Kulinski, M., & Breazeal, C. (2018). A Social Robot System for Modeling Children's Word Pronunciation: Socially Interactive Agents Track. In *Proceedings of the 17th International Conference on Autonomous Agents and MultiAgent Systems* (pp. 1658-1666).

Ali, S., To, A., Fath, E., Bai, Z., ... & Kaufman, G. (2018). Transition from Game Driven Goal Delineation to Goal Driven Game Design in Tandem Transformational Game Design. *Proceedings of the International Academic Conference on Meaningful Play 2018.*

Ali, S., Moeller, R., Choi, J., Hammer, J. (2017) Analytic Frameworks for Audience Participation Games and Tools. *Proceedings of Spectating Play 2017*

To, A., Fath, E., Zhang, E., **Ali, S.,** Kildunne, C., Fan, A., ... & Kaufman, G. (2016). Tandem Transformational Game Design: A Game Design Process Case Study. *Proceedings of the International Academic Conference on Meaningful Play 2016.*

To, A., **Ali, S.,** Kaufman, G., & Hammer, J. (2016). Integrating Curiosity and Uncertainty in Game Design. *DiGRA/FDG '16 - Proceedings of the First International Joint Conference of DiGRA and FDG.*

Agarwal, B., Goel, V., **Ali, S.,** Talukdar, N., & Sorathia, K. (2014). CaptuRing: A Tangible Imaging Tool for Brainstorming. *Proceedings of the India HCI 2014 ACM Conference on Human Computer Interaction (p. 132).*

BOOK CHAPTERS & MAGAZINES

Ali, S. DiPaola, D. (2023, Sept). Readying Robots for the Home. The Evolution of Human-robot Interaction. *XRDS Crossroads, the ACM Magazine for Students.*

To, A., **Ali, S.,** Kaufman, G. Hammer, J. (2018). Integrating Curiosity and Uncertainty in Game Design. The New Science of Curiosity (pp. 169-203). New York, NY: Nova Science Publishers, Inc.

SHORT PAPERS & POSTERS

Ragone, G., **Ali, S.** A., Esposito, A., Good, J., Howland, K., & Presicce, C. (2024, June). Child-Centered AI for Empowering Creative and Inclusive Learning Experiences. *Proceedings of the 23rd Annual ACM Interaction Design and Children Conference (pp. 1035-1057).*

Kumar, V., **Ali, S.,** & Worsley, M. (2023, June). PaintBall–Coding Sports Into Art for Cross-Interest Computational Connections. *Proceedings of the 22nd Annual ACM Interaction Design and Children Conference.*

Morales-Navarro, L., Kafai, Y., Castro, F., Payne, W., Desportes, K., DiPaola, D., Williams, R., **Ali, S.,** et al. Making Sense of Machine Learning: Integrating Youth's Conceptual, Creative, and Critical Understandings of AI. *Proceedings of the 17th International Conference of the Learning Sciences - ICLS 2023. Montréal, Canada: International Society of the Learning Sciences.*

Ali, S., Ravi, P., Moore, K., Breazeal, C., Abelson, H. (2023). Demystifying Text-to-Image generation for K12 educators. *Workshops and Tutorials: International Society of Learning Sciences 2023.*

Ali, S., Upadhyay, S., Hiranandani, G., Glassman, E. L., & Koyejo, O. (2022). Metric Elicitation; Moving from Theory to Practice. *Workshop on Human-Centered AI Workshop at NeurIPS 2022.*

Ali, S., Devasia, N., & Breazeal, C. (2021). Designing Games for Enabling Co-creation with Social Agents. *Workshop on Designing Games for and with Children at Interaction Design for Children (IDC) 2021.*

DiPaola, D., **Ali, S.,** Hong, J., Zhang, H., Breazeal, C., Lee, I. Youth as Investigators of Bias in Artificial Intelligence. *American Educational Research Association 2021.*

Ali, S., & Parikh, D. (2021). Telling creative stories using generative visual aids. *Workshop on Machine Learning for Creativity and Design, NeurIPS 2021.*

Saldias B., **Ali S.** (2020). Towards Child-Aware Machine Learning with a Focus on NLP Challenges and Applications. Women in Machine Learning Workshop. *Thirty-seventh International Conference on Machine Learning (ICML) 2020*

Devasia, N., **Ali, S.,** & Breazeal, C. (2020). Escape! Bot: Child-Robot Interaction to Promote Creative Expression During Gameplay. *Proceedings of the 2020 Annual Symposium on Computer-Human Interaction in Play.*

Ali S., Park H., Breazeal C. (2020). Influence of a Social Robot's Co-presence on Children's Figural Creativity. Workshop on Exploring Creative Content in Social Robotics. *ACM/IEEE International Conference on Human-Robot Interaction 2020.*

Ali S., Park H., Breazeal C. (2020). Drawing with Jibo: Influence of a Social Robot's co-presence on Children's Creativity. Workshop on Creativity and Robotics. *International Conference on Social Robotics.*

Ali S., DiPaola D., Lee I., Jackson D., Kiel J., Beal K., Zhang H., Cheng Y. and Breazeal C. (2020). Adapting K-12 AI Learning for Online Instruction. 2nd International Workshop on Education in Artificial Intelligence K-12 (EduAI '20). *Proceedings of German Journal of Artificial Intelligence 2/2021.*

Ali, S., Breazeal, C. (2018). The Use of Social Robots for Social Emotional Communication within Families with Autism Spectrum Disorder *Play Make Learn*

Ali, S., Bahuguna, B. (2016, July). Guilt, Robots, and Interaction Design. *Article*

Ali, S. (2016, June). The Suggested Web is Killing Discovery. *Article*

Ali, S., Moroso, T. (2019). Leveraging Social Robots as a Creativity Support Tool for Young Children. Poster. *Computer Science and Learning Science Symposium 2019.*

FELLOWSHIPS
- Teaching Development Fellow, Teaching and Learning Lab (TLL) MIT, 2023-2024
- Microsoft Research Fellow, 2022-2024
- Diversity, Equity, & Inclusion (DEI) Fellow, MIT, 2020-2023

AWARDS
- Scholarship to attend EAAI, 2025
- Graduate Teaching Award, MIT, 2024
- Rising Stars in AI, MIT Media Lab, 2024
- Kaufman Teaching Certificate, 2023
- Winner, Art Grant, The Council for the Arts at MIT (CAMIT), 2022
- Scholarship to attend EAAI, 2022
- Scholarship to attend Interaction 2020 & 2023
- TCS 100 Award, Best Outgoing Student of the Institute, IIT Guwahati, 2015
- Winner, City Robotics Hackathon, MIT Media Lab, 2018
- *Outbreak* - Best Student Non-Digital Game People's Choice Award. Meaningful Play 2016
- Kyoorius Student Design Award, Typography, 2014

- Inter-IIT Basketball league - *Silver* 2012 & *Bronze* 2014
- Certificate of Merit for Academic Excellence, BVM, Nagpur, 2009
- Scholarship for Meritorious Performance, Maharashtra Talent Search Examination, 2008

COURSES
I designed and led instruction for these courses.

MIT COURSES

Instructor	**EDCT-GE 2114. Experience Design and Artificial Intelligence** New York University, Spring 2025. Enrollment: NYU Master's and Ph.D. students
Instructor	**6.S062. Generative AI for K-12 Education** Massachusetts Institute of Technology, Fall 2023. Enrollment: MIT & Harvard graduate and undergraduate students
Instructor	**MAS.S65. Designing Learning Technology for Children** Massachusetts Institute of Technology, Spring 2022. Enrollment: MIT & Harvard graduate and undergraduate students
Instructor	**MAS.SX Text-to-Image Generation for K-12 Education** Massachusetts Institute of Technology, IAP 2023. Enrollment: MIT & Harvard graduate and undergraduate students, MIT staff

MOOCS

Instructor	**Driving Innovation with Generative AI (Module on Creative AI)** MIT xPro, Spring 2025
Instructor	**Impact and Application of Generative Artificial Intelligence within Education (Module on Text-to-image Generation)** IEEE Education Society hosted by Universidad Nacional de Educación a Distancia (UNED), Fall 2023

OTHER COURSES

Instructor	**Machine Learning in Scientific Discovery, SRMP Machine** American Museum of Natural History, Summer 2023. Enrollment: High school students
Instructor	**SureStart Virtual AI Learning Program (VAIL)** Remote, Fall 2023. Enrollment: Undergraduate students
Instructor	**Developing AI Literacy (DAILy)** STEAM Ahead and College Bound, Spring 2020 Enrollment: Middle school students

Instructor	**Generative AI Literacy for Educators**
	Remote, Fall 2022
	Enrollment: Middle and high school teachers & students

Curriculum	**ChatGPT in schools**
Developer	Day of AI, Spring 2023
	Enrollment: Middle and high school teachers & students

INVITED TALKS & PRESENTATIONS

- **AI Tools to Foster Creativity in Neurodivergent Youth**
  UNESCO Headquarters, France, Fall 2025
- **How to Leverage Artificial Intelligence in Your Career**
  The Intern Group, Summer 2025
- **Creative AI**
  Sungkyunkwan University, South Korea, Summer 2025
- **Human-AI Collaboration for Creativity**
  Global Colloquium at Kyungpook National University, South Korea, Summer 2025
- **Why AI & Art Matters**
  Museum of Fine Arts, Boston, Summer 2025
- **Learning Creative Learning with AI (Guest Lecture)**
  Massachusetts Institute of Technology, Spring 2025
- **Towards Inclusive AI Agents for Creative Learning (Guest Lecture)**
  Purdue University, Spring 2025
- **MAS Alumni in Faculty Panel**
  MIT Media Lab, Spring 2025
- **Doodlebot: An Educational Robot for Creativity and AI Literacy**
  Women in AI and Robotics, Fall 2024
- **Youth Creative Arts and AI**
  Panel, Bow Seat, Fall 2024
- **How Can AI Help Humans be Creative?**
  XCL World Academy, Singapore, Fall 2024
- **AI Tools, Curricula and Agents for Creative Learning**
  Harvard Graduate School of Education, Spring 2024.
- **AI for Creative Learning**
  New York University, Spring 2024
- **The Creativity and Ethics of Using AI for learning.**
  High School Summer Program, Muslim Student Association, MIT.
- **Generative AI for Creative Learning.**
  Guest Lecturer in MIT MAS.712. Learning Creative Learning, Spring 2023.
- **Creative AI for learning.**
  Women's Technology Program Showcase, Spring 2023
- **Creative AI - the what, why and how.**
  Guest Lecture at Science for Future Presidents, Boston College, Spring 2023.
- **Generative AI Tools.**
  Guest Lecture at School of Education, Boston College, Spring 2023.
- **K-12 AI Ethics & Art Literacy.**
  American Museum of Natural History, New York City, 2023.

- **Designers' Roles in Dystopian Futures.**
  Interaction 2023, Zurich, Switzerland, 2023.
- **Applied Generative AI in K-12 Learning.**
  Bridge Program, Guest Lecture, Boston, 2023.
- **Equitable and Liberatory CS Education: The Path to Culturally Responsive-Sustaining CS For All. (Panel)**
  Harvard Graduate School of Education, Alumni of Color Conference, 2022
- **AI Art.**
  Winchester High School, 2022.
- **Can AI Foster Human Creativity?**
  Future Maker Speaker Series, 2022.
- **Creative Human-AI Interaction and K-12 AI Literacy.**
  Everyday AI event, Cornell Tech, 2022.
- **Design Process for Developing Creativity Support Tools.**
  IDEO, 2022.
- **Advancements in K-12 CS Education.**
  Illinois Statewide K-12 CS Education Summit, University of Illinois 2021.
- **Child-robot Interaction for Creative Learning.**
  Brown University, 2021.
- **Can AI Foster Children's Creativity?**
  Microsoft Research Fellowship Symposium, 2021.
- **Collaborative Human-robot Interaction for Fostering Creativity.**
  Women in Machine Learning Young Scientist Feature, 2021.
- **Child-robot Interaction for Creative Learning.**
  STEM Week, Mexico, 2021.
- **Creative AI Education.**
  Day of AI, Massachusetts STEM week, 2021.
- **Developing AI Literacy in Middle School Students.**
  International Society for Technology in Education (ISTE), 2021.
- **Interweaving Ethics in AI Education.**
  Computer Science Teachers Association (CSTA), 2021.
- **Creative AI Literacy.**
  The Scheller Science and Engineering Program for Teachers, Education Arcade, 2020.
- **Developing Middle School AI Literacy.**
  Teacher with GUTS, 2020.
- **Creative Robots Inspiring Creativity.**
  Interaction 2020, Milan, Italy, 2020.
- **Introduction to AI Concepts.**
  BU Tech + Law Clinic Seminar, 2020.
- **Co-creative Robotic Agents.**
  Design talks at Sprinklr, 2020.
- **Personal Robots for Learning.**
  Science Carnival Cambridge 2018 & 2019.
- **AI + Ethics in the Classroom.**
  Jameel World Education Lab (J-WEL). Cambridge, 2019.
- **Interactive Robotic Toolkits for Creative Learning.**
  Tech Together (SheHacks Boston) 2018.

- **Social Robots for Education.**
  Emerging Education Technology in Frontier Markets, The Legatum Center, 2018.
- **Social Robots for Education.**
  Department of Design, Alumni Talks. 2017.
- **Digital Graphics for Interaction Design**
  Workshop at Human-computer Interaction Institute (HCII), Carnegie Mellon University, 2016.

TEACHING & MENTORING

- Instructor, 6.S062. Generative AI for K-12 Education MIT, Fall 2023.
- Instructor, Science Research and Mentorship Program (SRMP), American Museum of Natural History, New York, Summer 2023.
- Instructor, 7uice Foundation STEM Learning Workshop, MIT, Summer 2023.
- Guest lecture at "Science for Future Presidents" Class, Boston College, Spring 2023.
- Guest lecture at School of Education, Boston College, Spring 2023.
- Volunteer, Students Offering Students support (SOS) program, MIT Media Lab, 2023.
- Instructor, MAS Special Topic, Introduction to Text-to-Image Generation for K-12 Education MIT, IAP 2023
- Instructor, MAS.S65. Designing Learning Technology for Children, MIT, Spring 2022.
- Volunteer mentor, SureStart AI program, 2022.
- Instructor & head mentor, SureStart VAIL program, 2021.
- Instructor and coordinator, Future Makers Program for Middle Schoolers, MIT, Summer 2020.
- Instructor, Amazon Future Engineers, Creative AI Camp, Summer 2020.
- Instructor, College Bound AI Camp, Remote Instruction, Summer 2020.
- Instructor, Steam Ahead AI Camp, Remote Instruction, Summer 2020.
- Mentor, CovEd program for k-12 students from low income communities, Summer & Fall 2020.
- Instructor, RASP AI Camp, Remote Instruction, Summer 2020.
- Mentor and Organizer, MIT India Initiative, Mumbai, India, 2020 edition.
- Mentor, Clubes de Ciencia Mèxico, Guadalajara, Mexico, 2019 edition.
- Mentor, Girls who Code, 2019.
- Red Judge for IBM AI Xprize Competition, 2019.
- Mentor, SheHacks Boston, 2019.
- Mentor, MIT UROP program. (Mentees: D. Alfozan, T. Burghleh, Z. Lyu, N. Devasia, T. Morosa, V. Sindato, M. Alalawi)
- Mentor, Clubes de Ciencia Mèxico, in Chihuahua, 2018 edition.
- Mentor, SheHacks Boston, 2018.
- Student volunteer, Interaction Design Education Summit 2016, Helsinki, Finland.
- Teacher, English & Math for 7-12 graders in Nagpur, India as a part of Millat Education Trust.
- Teacher, English for middle school female students at Shishugram orphanage, Guwahati, India.

RESEARCH EXPERIENCE

Science Research and Mentoring Program (SRMP), AMNH NYC — *2021-2023*
Advisor: Irene Lee, Mark Weckel
The SRMP program is a science research and mentoring program for high schoolers conducted at the American Museum of Natural History (AMNH), New York. Used design-based research approaches to

design ML and Data Science curriculum for a 4-week summer institute to prepare students to use ML in their research. Focused on the technical components of common data science and ML algorithms, their applications in natural science and ethical implications. Assisted in developing an assessment concept inventory for measuring the efficacy of the curriculum and iteratively redesigning the curriculum based on research findings.

Generative AI Literacy — *2022-2023*
Advisors: C. Breazeal.
To make generative AI knowledge and tools accessible, developed, taught and researched the long-term efficacy of generative AI curricula for adult learners, creative and policy professionals, K-12 teachers and K-12 students. Conducted teacher professional development for the use of generative AI in K-12 classrooms. Developed plugged interactive and unplugged tools for facilitating generative AI learning.

Designing Child Robot Interaction for Fostering Creativity — *2018 - 2023*
Advisor: C. Breazeal.
Designed novel child robot interactions for collaborative problem solving in AI with the goal of fostering creativity in children. Developed a novel architecture for artificial creativity, and scaffolding for creative thinking through game decisions, and verbal and non-verbal behaviors. Evaluated the effect of the robot companion's behavior on children's creative problem solving. Currently designing collaborative creative child-robot storytelling experiences.

Creative AI Education for Middle Schoolers — *2020 - 2022*
Advisors: C. Breazeal, I. Lee
Designed a middle school AI curriculum focusing on Creative Machine Learning techniques such as GANs. Deployed the curriculum using synchronous online learning with 119 middle school students during Summer 2020. Developed web-based teaching tools, online activities and assessment tools. Currently assessing learning gains and training school teachers to teach our curriculum.

Long Term Child Robot Interaction to Foster Curiosity & Growth Mindset — *2018*
Advisors: H. Park, C. Breazeal
Developed and evaluated a novel expressive cognitive-affective architecture that synergistically integrated models of curiosity, understanding of mindsets, and expressive social behaviors. Developed algorithms for artificial curiosity, artificial mindset, and the verbal and non-verbal expressiveness in a social robot companion for children. Conducted a longitudinal study to evaluate the robot's ability to sustain engagement and promote children's curiosity and growth mindset.

Curiosity Assessment during Child Robot Interaction — *Fall 2017*
Advisors: C. Breazeal, R. Picard
Used game design and human robot interaction design principles to elicit curiosity in children while they play the learning game iSpy, with a curious robot Tega. Studied children's affects during high curiosity / uncertainty states. Used correlation analysis of affect and curiosity states to model children's curiosity and build a real time curiosity sensing model during child robot interaction.

Robotic Alternative Augmentative Communication tools for Autism — *Spring & Summer 2018*
Advisors: C. Breazeal, R. Picard
Designed and evaluated a communication tool that makes use of the social robot Jibo's speech and expressivity to help children with ASD with social and emotional communication. Designed and validated alternate modes of emotional self report for children with ASD.

Sensing curiosity in play — *August 2015 - March 2017*
Advisors: J. Hammer, G. Kauffman, A. To
Identified models, varieties, antecedents, and consequences of curiosity. Reviewed how each type of curiosity can be manifested during play. Participated in ideating for, prototyping, and playtesting games to encourage STEM comfort and engagement through increased curiosity.

Sonify, making visual graphs accessible — *Spring & Summer 2016*
Advisors: B. John, R. Ram, D. Gulley, K. Berntsen, G. Minnaret. Sponsor: Bloomberg
Conducted contextual research in computer accessibility to identify challenges faced by desktop users with disabilities. Developed and evaluated Sonify, an audio and tactile interface to make visually complex data visualization accessible to people with visual impairments.

RobotTutor, an open source tablet based learning tool — *Fall 2015*
Advisors: J. Mostow
Designed the Arithmetic module of the RoboTutor project that is now a finalist in Global Learning XPRIZE competition (winning $1 million). The nodule aims to teach single-digit addition and subtraction to elementary school children.

Designing wearable devices for pre-diabetic patients — *2014 - 2015*
Advisor: K. Sorathia. Sponsor: Nokia Research
Designed a wearable tool that uses intrinsic motivation and goal setting to persuade pre-diabetic patients to follow lifestyle prescriptions. Deployed an Android Wear compatible health monitoring application for pre-diabetic patients that visualizes real-time physical activity, temperature and stress levels. Evaluated the application with 21 pre-diabetic patients.12% avg. increase in rate of activity.

PROFESSIONAL EXPERIENCE

Research Intern, Facebook AI Research (FAIR) — *Summer 2021*
Designed collaborative human-AI doodling interactions and developing collaborative techniques that foster creativity in humans. Evaluated human-AI interactions in collaborative drawing tasks through user studies.

Research Assistant, Personal Robots, MIT Media Lab — *August 2017 - current*
Developing digital learning techniques for children leveraging AI and Human Robot Interaction. Fostering positive learning behaviors in AI education using Child Robot Interaction.

User Experience Designer, vArmour — *March 2017 - August 2017*
Designed the User Experience of several vertical products delivering data center and cloud security through micro-segmentation. Designed and developed data visualizations and GUIs.

Research Associate, Carnegie Mellon University — *September 2016 - March 2017*
Designed Audience Participation Games on Twitch. Formed audience participation research questions and conducted user research. Designed surveys and interviews, logged data from games, and managed and processed data in R.

User Experience Designer (Intern), Amazon — *Summer 2014*
Designed the User Experience of a desktop based Kindle authoring tool for creating, editing, and enriching Kindle content. Conducted usability evaluation of existing authoring tools. Conducted 6 contextual interviews, developed user personas, scenarios, and user journeys.

Design Lead, Techniche — *2013 - 2014*
Led the branding and overall design requirements of Techniche 2014, the annual techno-management festival of IIT Guwahati that observed a participation of 30,000 students. Led a team of 67 designers, event managers, and marketing executives.

User Experience Designer (Intern), Fractal Ink Design Studio — *Summer 2013*
Designed the User Experience of Samsung Club - a series of 6 native mobile apps. Designed the interface for mobile and tablet for clients including ICICI, Hungama TV, TCS, and Tenlegs.

SERVICE
2025

- Paper Committee, Educational Advances in AI (EAAI)
- Senior Reviews, Tech for Education (T4E)
- Reviewer, ACM Transactions on Computing Education
- Reviewer, International Journal of Child-computer Interaction (IJCCI)
- Program Committee Member, ACM Designing Interactive Systems (DIS)
- Reviewer, ACM Tangible and Embodied Interfaces (TEI)
- Reviewer, ACM Computer-Human Interaction (CHI)
- Reviewer, ACM Human-Robot Interaction (HRI)
- Reviewer, International Conference of the Learning Sciences (ICLS/CSCL)

2024

- Reviewer, ACM Computer-Human Interaction (CHI)
- Reviewer, ACM Human-Robot Interaction (HRI)
- Reviewer, International Journal of Human-Computer Studies (IJHCS)
- Reviewer, International Journal of Child-computer Interaction (IJCCI)
- Reviewer, Computers and Education (C&E)
- Reviewer, Technology in Society Journal
- Reviewer, Digital Interactive Systems (DIS)
- International Conference of the Learning Sciences (ICLS/CSCL)

2023

- Guest Editor, XRDS Crossroads, the ACM magazine for students
- National Science Foundation (NSF) Review Panel, Innovative Technology Experiences for Students and Teachers (ITEST)
- Program Committee Member, International Conference of the Learning Sciences (ICLS/CSCL)
- Reviewer, ACM Human-robot Interaction (HRI)
- Program Committee Member, ACM Designing Interactive Systems (DIS)
- Program Committee Member, ACM Creativity & Cognition (C&C)
- Reviewer, International Journal for Human-Computer Studies
- Reviewer, Transactions in Human-robot Interaction (THRI)
- Reviewer, ACM Computer-Human Interaction (CHI)
- Reviewer, ACM Interaction Design for Children (IDC)
- Reviewer, Nature Intelligence
- Reviewer, International Journal of Human-Computer Interaction (IJHCI)

2022

- Program Committee Member, Creativity & Cognition (C&C)
- Reviewer, Transactions in Human-robot Interaction (THRI))
- Reviewer, ACM Human-robot Interaction (HRI)
- Reviewer, ACM Computer-Human Interaction (CHI)
- Reviewer, Creativity & Cognition (C&C)
- Reviewer, Frontiers in Robotics and AI

2021

- Reviewer, Frontiers in Robotics and AI
- Reviewer, ACM Interaction Design for Children (IDC)
- Reviewer, ACM Computer-Human Interaction (CHI)
- Reviewer, Frontiers in Robotics and AI
- Reviewer, ACM Designing Interactive Systems (DIS)
- Reviewer, ACM Human-robot Interaction (HRI)
- Reviewer, Interaction Studies Journal

2020

- Reviewer, Frontiers in Robotics and AI
- Reviewer, ACM Computer-Human Interaction (CHI)
- Reviewer, ACM Human-robot Interaction (HRI)
- Reviewer, ACM Interaction Design for Children (IDC)

2019

- Reviewer, ACM Interaction Design for Children (IDC)

2016

- Student volunteer, Interaction 2016
- Student volunteer, Midwest UX 2016

SELECTED MEDIA COVERAGE

International Child Art Foundation (ICAF) Magazine. Creativity and AI. [link]

The New York Times. The AI Chatbots have Arrived. Time to talk to your kids. [link]

The New York Times. At This School, Computer Science Class Now Includes Critiquing Chatbots. [link]

The New York Times. Hey, Alexa, What Should Students Learn About A.I.? [link] (covers my research about AI literacy)

I-Think. AI Challenges Kit. [link]

Education Week. 'Day of AI' Spurs Classroom Discussions on Societal Impacts of Artificial Intelligence**.** [link] (covers my ChatGPT in schools curriculum)

Education Week. How Taylor Swift's Experience With 'Deepfakes' Can Help Students Examine AI Ethics [link] (interviewed me on what teachers students must know about implications of AI)

Chalkbeat New York. ChatGPT caught NYC schools off guard. Now, we're determined to embrace its potential. [link] (covers my ChatGPT in schools curriculum)

MIT Media Lab. Safinah Ali from Personal Robots was an educator for the Science Research + Mentoring Program at the American Museum of Natural History. [link]

Coding and More. AI in Art with Safinah Ali. [link]

MIT Media Lab. Safinah Ali named as 2022 Microsoft Research PhD Fellow. [link]

MIT News. At Mass STEM Week kickoff, MIT RAISE announces Day of AI [link]

Times of India. Safinah Ali sails over all barriers. [link]

MIT Media Lab. At Mass STEM Week kickoff, MIT RAISE announces Day of AI. [link]

Homegrown. MIT India Initiative 2020 : Mentors From Harvard & MIT Address The Local Challenges Of India. [link]

ET Now. Design, Technology & Social Innovation Workshop 2020. [link]

MITxHarvard Women in AI. Interview with Safinah Ali, MIT Media Lab [link]

Forbes. Clubes de Ciencia feature: These Kids Have Come 500 Miles To Do Science And Make A Difference. [link]

Tashkil. Career in Design Research. [link]