Rebecca Ramnauth

**Ph.D. candidate with the Yale Social Robotics Lab
interested in computational cognition**

Yale Social Robotics Lab
AKW 507, 51 Prospect St.
New Haven, CT 06511-8937

+1-347-693-7931
rebecca.ramnauth@yale.edu
rramnauth2220.github.io

Research Overview: I build theories about how people think, learn, and interact with the world around them. I apply these theories to develop interfaces and embodied platforms to optimally support stakeholders of various cognitive and technical abilities.

Keywords: social cognition, social interaction, computation, human-robot interaction (HRI)

· · · · ·

Education

August 2019 – *current*	**Ph.D. in Computer Science** · Yale Social Robotics Lab · Yale University Advisor: Dr. Brian Scassellati
August 2019 – May 2020	**M.Sc. in Computer Science** *en-route* · Yale Social Robotics Lab · Yale University Advisor: Dr. Brian Scassellati Thesis: Discovering the Neural Mechanisms of Dyadic Social Communication using Human-Robot Interaction
August 2019 – May 2020	**M.Phil. in Computer Science** · Yale University Advisor: Dr. Brian Scassellati and Dr. Marynel Vazquez Thesis: Cognitive Appraisal Interventions for Buffering the Emotional Effects of Isolation
September 2017 – May 2018	**M.Sc. in Computer Science** · Long Island University Advisors: Dr. Mohammed Ghriga and Dr. Ping-Tsai Chung Theses: An Adaptive & Integrative Knowledge Base Expert Suite for the Screening of Intellectual Disabilities; The Relationship Between Handwriting & Reading in Autism
September 2017 – May 2018	**B.Sc. Honors in Computer Science** · Long Island University Advisor: Dr. Christopher League

Experience

June 2020 – January 2021	**Visiting Lecturer** · Vaughn College of Aeronautics and Technology Designed and taught courses in robotics and computer programming

December 2018 • **Assistant Dean for Research & Curriculum Development** · Long Island University
– August 2019 School of Business, Public Administration, and Information Science
MSRE/MS in Urban Development at Brooklyn School of Business, Public Administration,
& Information Sciences · Designed the curriculum for the first graduate real-estate
program in Brooklyn and Long Island

May 2018 • **Adjunct Professor of Computer Science** · Long Island University
– August 2019 Designed and taught courses in creative computing, programming, and AI

**Board Member of LIU Brooklyn & U.S. Department of Education Early College
Initiative (ECI)**

June 2016 • **Software Developer & Programming Lead** · Legal Tech & Information Governance
– July 2019 Division · Consolidated Edison Company of New York

Compliance Tracking Systems
Programming lead for RSA Archer GRC Solution, Data Manager, and feed parser systems
for cradle-to-grave tracking of change management, operational risk, and compliance
items

Governance, Risk, and Compliance Solution
Advising on and consolidating workflows of compliance procedures and functional
requirements for 64+ departments on the regulatory entities of the industry

Data Management Tools
Engineered intelligent web-scrapers and cross-file translators that expedited data
population efforts by 85%

Software Risk Prediction
Principal researcher for a software risk prediction method for enterprise management
applications based on security metrics and the case-studies of various project
management approaches (Agile, Rational Unified Process, PRINCE2, ISO/1EC15504's
SPICE and Extreme Project Management) · Advisor: Dr. Anandi Singh, Ph.D.

July 2017 • **Software Developer & Administrator** · Business Ethics & Compliance · Consolidated
– July 2019 Edison Company of New York

Business Conduct Systems
Responsible for the configuration, and reliable operation of standards of business (SBC)
conduct training systems and the Conflict-Of-Interest tracking system

Process Automation and Testing
Engineered software robots for process automation and software testing, sentiment
analysis and opinion mining plugins for non-programmer's use through the MS Office
Suite, and text-identification tools for training assessments

Teaching

Spring 2021 • **Introduction to Human-Computer Interaction**, teaching fellow with Dr. Marynel Vazquez · Yale University · CPSC 584 and CPSC 484

Fall 2020 • **Algorithmic and Heuristic Composition**, teaching fellow with Dr. Scott Petersen · Yale University · CPSC 531 and CPSC 431

Fall 2020 • **Computational Vision & Biological Perception**, teaching fellow with Dr. Steven Zucker · Yale University · CPSC 575 and CPSC 475

Fall 2020 • **Principles of Programming for Robotics** · Vaughn College of Aeronautics and Technology

Summer 2020 • **Advanced Robotics** · Vaughn College of Aeronautics and Technology

Summer 2020 • **Advanced Robotics Lab** · Vaughn College of Aeronautics and Technology

Spring 2019 • **Business Information Systems** · Long Island University · BUS 110

Spring 2019 • **Programming in C++ Early Scholars** · CS 102 ECI

Spring 2019 • **Advanced Topics in Programming** · CS 117

Fall 2018 • **Programming in C++** · CS 102

Fall 2018 • **Fundamentals of Computer Science Early Scholars** · Long Island University · CS 101 ECI

Fall 2018 • **Fundamentals of Computer Science**, co-instructed with Dr. Christopher League · Long Island University · CS 101

Summer 2018 • **Summer Honors Institute Coding Academy** · LIU CS S

Awards and Grants

2021 • **Anita Borg Institute Grace Hopper Celebration Scholarship**
The Grace Hopper Celebration is the world's largest gathering of women technologists. It is produced by AnitaB.org and presented in partnership with ACM · Virtual · May 26 – May 30, 2021.
https://ghc.anitab.org/

2021 • **Nomination for Distinguished Undergraduate Teaching** · Yale University
The Yale Prize Teaching Fellowships recognize outstanding performance and promise as a teacher. "They are considered among the most important honors that Yale bestows upon graduate students."
https://gsas.yale.edu/academic-requirements/teaching-fellows-requirements/prize-teaching-fellows

2021 • **ACM-WP Computing Research Association Conference Grant**

CRA-WP annual conference aims to engage and increase the participation of individuals from additional underrepresented groups in the graduate computing research community · Virtual · April 14 - 20, 2021. https://women.acm.org/scholarships/

2020 - 2025 • **National Science Foundation Graduate Research Fellowship**
The NSF-GRFP is a prestigious grant awarded to approximately < 10% of student applicants pursuing research-based graduate degrees. Award amount: $46,000 x 3 years. Proposal*: Discovering the neural mechanisms of dyadic social interaction using human-robot interaction*
https://www.nsfgrfp.org/

2020 - 2025 • **National Academies of Sciences, Engineering, and Medicine's Ford Foundation Predoctoral Fellowship**
The Ford Fellowship is a competitive grant awarded to < 5% of Ph.D. or Sc.D. students applicants by the National Academics of Science, Engineering, and Medicine. Award Amount: $27,000 x 3 years. Proposal*: Discovering the neural mechanisms of dyadic social interaction using human-robot interaction*
https://sites.nationalacademies.org/PGA/FordFellowships/PGA_047958

2020 • **Anita Borg Institute Grace Hopper Celebration Scholarship**
Orlando, Florida, USA · Sept. 29 – Oct. 2, 2020.

2020 • **ACM-WP Computing Research Association Conference Grant**
New Orleans, Louisiana, USA · April 14 - 20, 2020.

2020 • **Microsoft Research Frontiers in Machine Learning Conference Grant**
This four-day conference brought together academics, researchers, and Ph.D. Students. The program was rich, engaging, and filled with current themes and research outcomes spanning theory and practice in Machine Learning · Virtual · July 20 - 23, 2020.
https://www.microsoft.com/en-us/research/event/frontiers-in-machine-learning-2020/

2018 • **Faculty Award** · **Long Island University**
Presented by the LIU Brooklyn Department of Business, Public Administration, & Information Science faculty board

2018 • **Undergraduate Excellence Award** · **Long Island University**
Awarded to top undergraduate student in the LIU Brooklyn Department of Business, Public Administration, & Information Science

2018 • **Best Paper** · **IEEE Regional Conference**
An Adaptive & Integrative Knowledge Base Expert Suit for the Screening of Intellectual Disabilities

Publications

Peer-reviewed Conference Publications

C4 Rebecca Ramnauth, Emmanuel Adéníran, Timothy Adamson, Michal A. Lewkowicz, Rohit Giridharan, Caroline Reiner, and Brian Scassellati. 2022. "A Social Robot for Improving Interruptions Tolerance and Employability in Adults with ASD." In *Proceedings of the 2022 ACM/IEEE International Conference on Human-Robot Interaction* (*HRI '22*). Association for Computing Machinery, Sapporo, Hokkaido, Japan.

C3	Nathan Tsoi, Joe Connolly, Emmanuel Adéníran, Amanda Hansen, Kaitlynn Taylor Pineda, Timothy Adamson, Sydney Thompson, **Rebecca Ramnauth**, Marynel Vázquez, and Brian Scassellati. 2021. "Challenges Deploying Robots During a Pandemic: An Effort to Fight Social Isolation Among Children." In *Proceedings of the 2021 ACM/IEEE International Conference on Human-Robot Interaction* (*HRI '21*). Association for Computing Machinery, New York, NY, USA, 234–242.
C2	**Rebecca Ramnauth**, Ping-Tsai Chung, and Mohammed Ghriga. 2018. "An Adaptive & Integrative Knowledge Base Expert Suite for the Screening of Intellectual Disabilities." In *Proceedings of the 2018 ACM/IEEE Regional 1 Conference* (*IEEE R1 '18*). Association for Computing Machinery, New York, NY, USA.
C1	**Rebecca Ramnauth**, Ping-Tsai Chung, and Mohammed Ghriga. 2018. "The Relationship Between Handwriting & Reading in Autism." In *Proceedings of the 2018 ACM/IEEE Regional 1 Conference* (*IEEE R1 '18*). Association for Computing Machinery, New York, NY, USA.

Presentations

March 2022	•	ACM/IEEE International Conference on Human-Robot Interaction (HRI '22) · *A Social Robot for Improving Interruptions Tolerance and Employability in Adults with ASD*
October 2021	•	Ford Foundation Conference · *Designing Social Robots for Individuals with Autism*
July 2021	•	Yale Young Global Scholars Research Showcase II · *Audio Scene Analysis in Social Robots*
June 2021	•	Yale Young Global Scholars Research Showcase I · *Social Robotics for Autism*
April 2021	•	ACM-WP Computing Research Association Conference · *Robots for Good: The Potential Role of Socially Assistive Robots During COVID-19*
March 2021	•	ACM/IEEE International Conference on Human-Robot Interaction (HRI '21) · *Challenges Deploying Robots During a Pandemic: An Effort to Fight Social Isolation Among Children*
February 2021	•	Nicholas Christakis Human Nature Lab · *Investigating Group Dynamics Using Social Robots for Children with Autism*
October 2020	•	Ford Foundation Conference · *Social Robotics for Improving Interruptions Tolerance and Employability in Adults with Autism*
October 2020	•	Ford Foundation Conference · *Being Sensitive to the Social Context Means Knowing When to Interrupt*
May 2018	•	Public School 7 · *Audio-Visual Simulation for Children with Hearing & Learning Difficulties through Music*

May 2018 •	IEEE Systems, Man, and Cybernetics Society Student Branch · *Introduction to Big Data Clustering using Voronoi Diagrams and the k-means Algorithm*
May 2018 •	Long Island University IEEE Branch · *Analysis & Demonstration of Common Object Request Broker Architecture*
March 2018 •	IEEE Region 1 Conference · *The Relationship Between Handwriting & Reading in Autism*
March 2018 •	IEEE Region 1 Conference · *An Adaptive & Integrative Knowledge Base Expert Suite for the Screening of Intellectual Disabilities*
March 2018 •	New York Institute of Technology IEEE Computer Society Student Branch · *Relating Introspective Abilities to Enhance Special-Needs Literacy Education*
December 2017 •	IEEE Computer Society Student Branch · *Source Code Vulnerabilities & Improvements to the Software Development Life Cycle*
December 2017 •	IEEE Systems, Man, and Cybernetics Society Student Branch · *Methods for Improving Domain-Specific Knowledge Bases for Expert Systems*
July 2015 •	Microsoft NYC · *Data Searching & Sorting Algorithms for Social Science*

Professional Service

Program Committee Member

2018 •	International Conference on Dependable Systems and Their Applications (IEEE)
2018 •	International Conference on Trustworthy Systems and Their Applications (IEEE)
2018 •	International Conference on Dependable Computing and Internet of Things (IEEE)
2018 •	International Conference on Creative Lifestyle Computing (IEEE)
	International Symposium on Art-Science-Architecture
	International Symposium on Art-Science-Architecture

Journal Referee

2019 – *current* •	Journal of Autism and Developmental Disorders (JADD)
2021 •	Frontiers Robotics and AI
2019 – 2021 •	International Journal of Child-Computer Interaction (IJCCI)
2019 – 2021 •	IEEE Transactions on Cognitive and Developmental Systems (IEEE-TCDS)
2019 – 2021 •	SAGE Journal of Autism (SAGE-JoA)
2018 – 2021	International Journal of Creative Computing (IJCrC)

Conference Referee

2019 – *current*	•	ACM/IEEE Conference on Human Robot Interaction (HRI)

Member

2018 – *current*	•	Association for Computing Machinery (ACM)
2018 – 2020	•	ACM Computer Science Teachers Association
2017 – 2019	•	Institute of Physics (IOP) Computational Physics Group
2017 – 2019	•	IEEE Computer Society
2017 – 2019	•	IEEE Systems, Man, and Cybernetics Society

Volunteer

2020 – 2021	•	Mentor · Health Career Opportunity Programs · University of Connecticut
2020 – 2021	•	Mentor · STEM High School Academy · Vaughn College
2014 – 2019	•	Mentor · Engineering Science Programs · Brooklyn Technical High School
2015 – 2019	•	Contributor · Stanford Scholars Initiative
2015 – 2017	•	Instructor · Girls Who Code · Brooklyn Technical High School
2014 – 2017	•	Coordinator · New York State Division · Special Olympics
2014 – 2017	•	Mentor · Mechanical Engineering and Programming · FIRST Robotics
2015 – 2017	•	Counselor · Special Educational Needs Guidance Dept. · Brooklyn Technical High School

Mentoring

2021	•	Skylar Regan, Yale Undergraduate '21 · Computer Science Thesis Project *Tracking Attentional Gaze of Children with ASD in a Long-Term, In-Home Social Robotics Study*
2021	•	Maciej Zielonka, Yale Undergraduate '21 · Computer Science Thesis Project *To what extent does speech behavior signal social contingency?*
2020	•	Louisa Nordstrom, Yale Undergraduate '20 · Senior Cognitive Science Thesis Project *The effect of differential spatiotemporal contexts on the perceptual saliency of animacy, emotion, and intentionality*
2019	•	Wooje Chang, Yale Undergraduate '20 · Senior Cognitive Science Thesis Project *Neural mechanisms of human-to-chatbot communication to investigate the applicability of the interactive brain hypothesis to artificial stimuli*
2019	•	Jessica McCurdy, Yale Undergraduate '20 · Senior Cognitive Science Thesis Project *Impact of human-robot synchronization on perceptions of fair, strategic, and altruistic behavior*

Related Press

Nov. 2, 2021	•	*AI, Virtual Reality, and Robots Advancing Autism Diagnosis and Therapy* · IEEE Pulse and IEEE Engineering in Medicine and Biology Society · https://www.embs.org/pulse/articles/ai-virtual-reality-and-robots-advancing-autism-diagnosis-and-therapy/

Sept. 23, 2020 • Yale researchers develop AI technology for adults with autism · Yale Daily News · https://yaledailynews.com/blog/2020/09/23/yale-researchers-develop-ai-technology-for-adults-with-autism/

Sept. 11, 2020 • *Tech to Help People with ASD in the Workplace Gets NSF Funding* · Yale SEAS · https://seas.yale.edu/news-events/news/tech-help-people-asd-workplace-gets-nsf-funding

June 9, 2020 • *Fighting Social Isolation with Robots* · Yale SEAS · https://seas.yale.edu/news-events/news/fighting-social-isolation-robots

March 31, 2020 • *Three Scazlab members to receive coveted 2020 NSF GRFP award* · Yale Social Robotics Lab · https://scazlab.yale.edu/news/three-scazlab-members-recieve-coveted-2020-nsf-grfp-award

March 31, 2020 • *Rebecca Ramnauth (GS) wins the prestigious 2020 NSF Graduate Research Fellowship* · Yale University Computer Science · https://cpsc.yale.edu/news/valerie-chen-my20-and-rebecca-ramnauth-gs-win-prestigious-2020-nsf-graduate-research-fellowship