

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 • **Ph.D. in Computer Science** · [Yale Social Robotics Lab](#) · Yale University
– *current*
Advisor: Dr. Brian Scassellati
- August 2019 • **M.Sc. in Computer Science *en-route*** · [Yale Social Robotics Lab](#) · Yale University
– May 2020
Advisor: Dr. Brian Scassellati
Thesis: Discovering the Neural Mechanisms of Dyadic Social Communication using Human-Robot Interaction
- August 2019 • **M.Phil. in Computer Science** · Yale University
– May 2020
Advisor: Dr. Brian Scassellati and Dr. Marynel Vazquez
Thesis: Cognitive Appraisal Interventions for Buffering the Emotional Effects of Isolation
- September 2017 • **M.Sc. in Computer Science** · Long Island University
– May 2018
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 • **B.Sc. Honors in Computer Science** · Long Island University
– May 2018
Advisor: Dr. Christopher League

Experience

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

- December 2018 – August 2019 • **Assistant Dean for Research & Curriculum Development** · Long Island University 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 – August 2019 • **Adjunct Professor of Computer Science** · Long Island University
 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 – July 2019 • **Software Developer & Programming Lead** · Legal Tech & Information Governance 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 – July 2019 • **Software Developer & Administrator** · Business Ethics & Compliance · Consolidated 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-designed with Dr. Christopher League · Long Island University · CS 101
- Summer 2018 • **Summer Honors Institute Coding Academy** · LIU CS S

Awards

- 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**
 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 · Orlando, Florida, USA · Sept. 29 – Oct. 2, 2020.
<https://ghc.anitab.org/>
- 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

Presentations

- 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 · **An Introduction to Data Searching & Sorting Algorithms**
Introduced stability, time and space complexities of several sorting algorithms, the formal notational methods for stating the growth of resource needs (Big-O, Little-o, Theta, and Omega notations), and programming in MIX, JavaScript, and Java, and performance profiling tools.

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)
- 2019 – *current* • International Journal of Child-Computer Interaction (IJCCI)
- 2019 – *current* • IEEE Transactions on Cognitive and Developmental Systems (IEEE-TCDS)
- 2019 – *current* • SAGE Journal of Autism (SAGE-JoA)
- 2018 – *current* • 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 • | LIU IEEE Computer Society
- 2017 – 2019 • | LIU Student Branch for Systems, Man, and Cybernetics Society

Volunteer

- 2020 – *current* • | 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

- 2019 – 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

- 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-recvie-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>