Aditi Ramachandran

Social Robotics Lab, Yale University
51 Prospect St. Rm. 505
New Haven CT 06511 USA

Ph.D. Candidate
aditiramachandran@gmail.com
http://aditiramachandran.com

Education

Ph.D.
Computer Science
2012 - current

Yale University
Thesis topic: *Personalization Within Robot-Child Tutoring Interactions*
Advisor: Brian Scassellati
Area of study: Social Robotics

M.S., M.Phil
Computer Science
2012 - 2015

Yale University
Advisor: Brian Scassellati
Area of study: Social Robotics

B.S.
Computer Science
& Mathematics
2006 - 2010

Georgetown University
Thesis: *Re-identification Matching Across Social Network Sites*
Advisor: Lisa Singh
GPA: 3.86/4.00
Honors: Magna Cum Laude, Phi Beta Kappa

Research Positions

Yale University Social Robotics Lab, Graduate Research Assistant — 2012-present
Studying the effects of socially assistive robots in novel application domains funded by NSF Expedition grant. Designed, implemented, and conducted multiple human-robot interaction studies in which children interact with autonomous robots within educational settings. Currently conducting research involving robots as autonomous one-on-one tutoring agents, with the goal of providing personalization within tutoring interactions. Specifically investigating various supportive behaviors that a robot tutor can provide to children during math-based tasks.

Georgetown University, Undergraduate Research Assistant — 2009-2010
Completed research project with faculty member in the Department of Computer Science involving reidentification and matching publicly available data from different social networks to correctly identify a person. Wrote scripts to automate the collection of public data from social networking websites. Examined the role that friendship links within social networks have in matching users across datasets.

Work Experience

The MITRE Corporation, Artificial Intelligence Engineer — 2010-2012
Collaborated on two projects involving agent-based modeling for government sponsors. Specifically, conducted a sensitivity analysis of a counterinsurgency agent-based model, and generated novel data visualization products used for output analysis. Contributed to a research project by applying self-organizing maps to pixel classification of hyperspectral images. Implemented an efficient path planner for agents in a large agent-based model.

National Security Agency, Computer Science Summer Intern — 2009
Completed the Computer Science Intern Program and held top secret clearance. Developed software to assess a variety of short path measures between two nodes within complex networks. Applied advanced clustering techniques to discriminate between possible origins of intercepted foreign communications. Extended Java skills to include XML digestion and Java XML binding, relational database connectivity and use of Hibernate for object-relational mapping, and JFreeChart, an open-source visualization suite.

Teaching

Intelligent Robotics, Yale University — 2013-2016
Teaching Assistant, 4 semesters
Graded assignments and held weekly office hours, extra help meetings, and exam review sessions for students in this upper level course. Designed problem sets with other TAs relevant to the class material.

Introduction to Computer Science, Georgetown University — 2009
Teaching Assistant, 1 semester
Graded assignments and held weekly office hours for students in this introductory computer science course for undergraduate majors.

Introduction to Computer Science for Non-Majors, Georgetown University — 2007-2008
Teaching Assistant and Lab Instructor, 3 semesters
Independently conducted a lab portion of an introductory computer science class. Taught basic html and JavaScript programming. Graded homework and projects and held office hours to assist students with questions and provide extra help.

Awards

Best Paper Award Nominee for "Studies of HRI", Human-Robot Interaction (HRI) — 2016

HRI Pioneer — 2015

CRA-W Grad Cohort — 2015

Best Student Paper Award, Privacy, Security, and Trust (PST) — 2012

Clare Boothe Luce Scholarship — 2008-2010
Provided financial support covering full tuition, room and board, and additional expenses for two years at Georgetown University. Awarded to one STEM student per year at Georgetown.

Selected Publications

Ramachandran, A., Huang, C.-M., Gartland, E., and Scassellati, B. (2018). Thinking aloud with a tutoring robot to enhance learning. In *ACM/IEEE International Conference on Human-Robot Interaction*, pages 59–68

Ramachandran, A., Huang, C.-M., and Scassellati, B. (2017). Give me a break!: Personalized timing strategies to promote learning in robot-child tutoring. In *ACM/IEEE International Conference on Human-Robot Interaction*, pages 146–155

Ramachandran, A., Litoiu, A., and Scassellati, B. (2016). Shaping productive help-seeking behavior during robot-child tutoring interactions. In *ACM/IEEE International Conference on Human Robot Interaction*, pages 247–254 Nominated for best paper award for "Studies of HRI"

Activities and Outreach

Robotics Outreach — 2012-present
Regularly participate in a variety of outreach activities showcasing robots from the Yale Social Robotics Lab at open houses, visits to local schools, and public events.

Yale Jashan Bhangra Dance Team — 2012-present
Led team as co-captain for 2013-2014 academic year. Performed at several national competitions.

DC Metro Punjabi Arts Academy Dance Team — 2010-2012

Georgetown University Peer Advisor — 2007-2010
Advised and mentored incoming math majors

Georgetown University South Asian Society — 2006-2010
Choreographed for and actively participated in Rangila, Georgetown's largest annual cultural show.