

Kaitlynn T. Pineda

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RESEARCH OVERVIEW

My research focuses on integrating robot-initiated social small talk into physical, human-robot collaborative tasks, aiming to enhance interactive experiences without causing task disruptions. I am currently developing an autonomous robot system powered by Large Language Models (LLMs) that will serve as a collaborative teammate and engage in small talk.

EDUCATION

Johns Hopkins University, Baltimore, MD 08/2021 – Present
PhD in Computer Science

Advisors: Chien-Ming Huang and Gregory D. Hager

Johns Hopkins University, Baltimore, MD 05/2024
MSE in Computer Science

Selected Coursework: Human-Robot Interaction, Human-Computer Interaction, Computer Vision, Deep Learning

Yale University, New Haven, CT 08/2017 – 05/2021
Bachelor of Science in Electrical Engineering and Computer Science, Certificate in Spanish

Selected Coursework: Intelligent Robotics Laboratory (Graduate level), Building Interactive Machines, Artificial Intelligence, Neural Networks and Learning Systems, Systems Programming, Digital Systems, Circuits and Systems Design, Electronics

RESEARCH EXPERIENCE

Johns Hopkins University, Baltimore, MD 08/2021 – Present
Graduate Research Assistant

- Conducts research in the [Intuitive Computing Lab](#) and [Laboratory for Computation Sensing and Robotics](#)

Yale University, New Haven, CT 08/2019 – 05/2021
Undergraduate Research Assistant (STARS II Program) | Social Robotics Lab

- Designed a project to detect human uncertainty for task completions in Human-Robot Interaction settings
- Developer on the Yale [Robots for Good](#) project that helps children fight social isolation during COVID-19
- Conducted behavioral analysis of children with ASD using a long-term, in-home socially assistive robot
- Presented at the 2021 STARS II Symposium and the 2021 Pauli Murray College Mellon Forum

Undergraduate Research Assistant (STARS I Program) | Social Robotics Lab 05/2018 – 07/2018

- Designed experimental structure to analyze the human sense of fairness and trust in robots
- Programmed a video game interface through Unity for participant interaction
- Presented at the 2018 STARS I Summer Symposium and the 2018 Yale Undergraduate Research Symposium

Université catholique de Louvain, Louvain-la-Neuve, Belgium 05/2019 – 07/2019
Research Assistant

- Worked with convolutional neural networks (CNNs) for biomedical image segmentation
- Trained an autoencoder to capture the morphological structure of the segmentation labels
- Regularized the CNN-based segmentation model based on the decoder learned from the priors

WORK EXPERIENCE

Meta, Menlo Park, CA 06/2021 – 08/2021
Software Engineering Intern | Oculus

- On the Planck Length team within Meta Reality Labs creating a pipeline to facilitate synthetic data generation
- Developed internal visualization tools for the verification of proposed algorithms

Software Engineering Intern | FAIAR 06/2020 – 08/2020

- On the AI Applied Research – Conversational AI team working on dialog policy for Meta smart glasses
- Developed internal testing tools for android and web-based platforms

SELECTED PUBLICATIONS

Peer-Reviewed Journal Articles

[J-1]. G. Ajaykumar, **K. T. Pineda**, & C. M. Huang. (2023). *Older adults' expectations, experiences, and preferences in programming physical robot assistance*. International Journal of Human-Computer Studies, 180, 103127.

Peer-Reviewed Conference Papers

- [C-3]. **K. T. Pineda**, E. Brown, & C. M. Huang. *“See You Later, Alligator”*: Impacts of Robot Small Talk on Task, Rapport, and Interaction Dynamics in Human-Robot Collaboration. Proceedings of 2025 ACM/IEEE International Conference on Human-Robot Interaction (HRI) (2025)
- [C-2]. N. Salomons, **K. T. Pineda**, A. Adéjare, & B. Scassellati. *“We Make a Great Team!”*: Adults with Low Prior Domain Knowledge Learn more from a Peer Robot than a Tutor Robot. Proceedings of 2022 ACM/IEEE International Conference on Human-Robot Interaction (HRI) (2022)
- [C-1]. N. Tsoi, J. Connolly, E. Adéniran, A. Hansen, **K. T. Pineda**, T. Adamson, S. Thompson, R. Ramnauth, M. Vázquez, & B. Scassellati. *Challenges Deploying Robots During a Pandemic: An Effort to Fight Social Isolation Among Children*. Proceedings of 2021 ACM/IEEE International Conference on Human-Robot Interaction (HRI) (2021)

Preprints

- [M-1]. **K. T. Pineda**, A. Mahmood, & C. M. Huang. *“You Might Like It”*: How People Respond to Small Talk in Human-Robot Collaboration. In: *arXiv preprint arXiv:2312.07454* (2023). [Under Review]

PERSONAL AWARDS

Robotics Science and Systems (RSS) Inclusion Fellow	2022
Johns Hopkins Computer Science Departmental Fellowship	2021 – 2022
Howard and Jacqueline Chertkof Endowed Fellowship	2021 – 2022
Science, Technology and Research Scholars (STARS) II Program	2019 – 2021
Alan S. Tetelman 1958 Fellowship for International Research in the Sciences	2019
Science, Technology and Research Scholars (STARS) I Summer Program	2018
Science, Technology and Research Scholars (STARS) I Program	2017 – 2018

TEACHING EXPERIENCE

Computer Science Teaching Assistant , Baltimore, MD <i>EN.601.490/690 Human-Computer Interaction</i>	Fall '22, Fall '23, Fall '24, Spring'25
<ul style="list-style-type: none">Held weekly office hours, graded assignments, and facilitated in-class exercisesPrepared and gave a course lecture regarding empirical studies in human-AI interaction	
Computer Science Learning Assistant , New Haven, CT <i>CPSC 470/570 Artificial Intelligence TA</i>	Spring '22
<ul style="list-style-type: none">Held weekly remote office hours, graded assignments, and attended weekly staff meetingsPrepared and gave a course lecture and led the in-person final exam review session	
CPSC 223 Data Structures Undergraduate Learning Assistant (ULA)	Spring '20
<ul style="list-style-type: none">Held evening office hours to assist students with their programming problem setsAttended weekly staff meetings with the course instructor and other ULAs to discuss course material	
Science and Quantitative Reasoning Tutoring Program , New Haven, CT <i>CPSC 223 Data Structures Peer Tutor</i>	Fall '20
<ul style="list-style-type: none">Held 1-1 tutoring sessions with students to review course concepts and prepare for exams	

SERVICE

Organizer for RSS 2022 Workshop	01/2022 – 07/2022
Johns Hopkins LCSR Graduate Student Association , Baltimore, MD <i>President</i>	01/2024 – Present
Johns Hopkins Computer Science Graduate Student Council , Baltimore, MD <i>Social Committee</i>	04/2022 – Present

SKILLS

Programming: Python (PyTorch), C, C++, R, MATLAB, LaTeX, Git, Linux Commands
Software: ROS, Gazebo, Rviz, JMP, MAXQDA, AutoCAD, Unity, Adobe Illustrator, Figma
Hardware: Franka Research 3, Kinova Gen3, UR5, Pupil Labs Invisible (gaze tracking), Arduino