Kathy Garcia

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Education

2022 - Present — Johns Hopkins University
Ph.D. in Computational Cognitive Science | GPA: 4.0/4.0
M.A. in Computational Cognitive Science | 2024 | GPA: 4.0/4.0
Advisor: Leyla Isik

2013 - 2017 — Stanford University
B.S. in Science, Technology, and Society

Experience

2022 - Present — **Graduate Researcher | Computational Cognitive Neuroscience Lab**
Johns Hopkins University
PI: Leyla Isik

Exploring computational models for dynamic and social visual perception by assessing diverse Deep Neural Networks (DNNs) against the lateral visual stream's response to naturalistic videos, and analyzing their hierarchical alignment with brain regions like the superior temporal sulcus (STS).

2020 - 2021 — **Research Fellow | NU-IN Postbaccalaureate Research Research Program**
Northwestern University
PI: Robin Nusslock

Developed machine learning models for predicting dimensional symptoms of psychopathology from task-based fMRI using support vector regression, and clustering dimensional symptoms of psychopathology and related cognitive effects.

2019 - 2020 — **Staff Research Associate | TMS Clinic and Research Program**
University of California, Los Angeles

Assisted in clinical and technical procedures to facilitate doctors and researchers to provide repetitive transcranial magnetic stimulation (rTMS) treatment, and pioneered an automated data processing algorithm to reduce patient data processing time from 20 minutes to 1 second per patient while eliminating human error.

2017 - 2018 **Data Scientist & KDB+/Q Engineer | KX Systems/First Derivatives**

Collaborated with a team of consultants to implement kdb+/q framework for major US financial institutions, migrating an existing multi-region financial trade data capture and enrichment system involving combined static and real-time data source handling.

Publications

2025 **Garcia, K.**, Subramaniam, V., Katz, B., Cheung, B. Look, Then Speak: Social Tokens for Grounding LLMs in Visual Interactions. *Accepted manuscript for NeurIPS 2025 Workshop on Universal Representations (UniReps)*: August 2025

2025 **Garcia, K.**, Isik, L. Semantic and Social Features Drive Human Grouping of Dynamic, Visual Events in Large-Scale Similarity Judgements. *Journal of Vision, 25*(9), pp. 2621: July 2025

2025 **Garcia, K.***, McMahon, E.*, Conwell, C., Bonner, M.F., Isik, L. Modeling Dynamic Social Vision Reveals Gaps Between Deep Learning and the Human Brain. *In Proceedings of the Thirteenth International Conference on Learning Representations (ICLR)*: April 2025

2024 **Garcia, K.**, McMahon, E., Conwell, C., Bonner, M.F., Isik, L. Large-scale Deep Neural Network Benchmarking in Dynamic Social Vision. *Journal of Vision, 24*(10), pp. 716: September 2024

2024 McMahon, E., **Garcia, K.**, Conwell, C., Bonner, M.F., Isik, L. Language model prediction of visual cortex responses to dynamic social scenes. *Journal of Vision, 24*(10), pp. 904: September 2024

Invited Talks

2025 **Garcia, K.**, Isik, L. Semantic and Social Features Drive Human Grouping of Dynamic, Visual Events in Large-Scale Similarity Judgments. Talk presentation at the annual meeting for the Vision Sciences Society (VSS): May 2025

2025 **Garcia, K.**, McMahon, E., Conwell, C., Bonner, M.F., Isik, L. Bridging the Gap: Modeling Dynamic Social Vision in Humans and AI. Guest speaker presentation at the Research Meeting for the Scaffolding of Cognition Team, Stanford University: February 2025

2024 **Garcia, K.**, McMahon, E., Conwell, C., Bonner, M.F., Isik, L. Modeling Dynamic Social Vision Reveals Gaps Between Deep Learning and the Human Brain. Talk presentation at the annual meeting for Computational Cognitive Neuroscience (CCN): August 2024

2024 **Garcia, K.**, McMahon, E., Conwell, C., Bonner, M.F., Isik, L. Modeling Dynamic Social Vision Reveals Gaps Between Deep Learning and the Human Brain. Talk presentation at the annual meeting for the International Conference on Machine Learning (ICML), LatinX in AI Workshop: July 2024

2024 **Garcia, K.**, Conwell, C., McMahon, E., Bonner, M.F., Isik, L. Large-scale Deep Neural Network Benchmarking in Dynamic Social Vision. Talk presentation at the annual meeting for the Vision Sciences Society (VSS): May 2024

2024 **Garcia, K.**, Conwell, C., McMahon, E., Bonner, M.F., Isik, L. Dynamic, social vision highlights gaps between deep learning and humans. Brown bag talk at the Johns Hopkins University, Department of Cognitive Science: April 2024

2020 **Garcia, K.** Review Discussion on MVPA Methods, Principles of fMRI Course, Evanston, IL. Oral Presentation: July 2020

Poster Presentations

2025 **Garcia, K.**, McMahon, E., Conwell, C., Bonner, M.F., Isik, L. Modeling Dynamic Social Vision Reveals Gaps Between Deep Learning and the Human Brain. Poster to be presented at the upcoming annual meeting for the International Conference on Learning Representations (ICLR): April 2025

2024 **Garcia, K.**, McMahon, E., Conwell, C., Bonner, M.F., Isik, L. Modeling Dynamic Social Vision Reveals Gaps Between Deep Learning and the Human Brain. Poster presented at the upcoming annual meeting for the Computational Cognitive Neuroscience Conference (CCN): August 2024

2024 **Garcia, K.**, McMahon, E., Conwell, C., Bonner, M.F., Isik, L. Modeling Dynamic Social Vision Reveals Gaps Between Deep Learning and the Human Brain. Poster presented at the annual meeting for the International Conference on Machine Learning (ICML), LatinX in AI Workshop: July 2024

2021 **Garcia, K.**, Anderson, Z., Chat, I. K., Damme, K., Bookheimer, S.Y., Zinbarg, R., & Craske, M., Nusslock, R. Predicting Dimensional Symptoms of Psychopathology from Task-Based fMRI using Support Vector Regression. Poster presented at the annual meeting for the Society for Neuroscience (SFN): January 2021

In The News

2025 *AI Can't Compete With Humans When It Comes to Reading the Room*, **The Wall Street Journal**, by Eric Niiler, May 23, 2025.
https://archive.is/wAcZZ#selection-2537.0-2537.62

2025 *When It Comes To Reading The Room, Humans Are Still Better Than AI*, **The Hub, JHU**, by Hannah Robbins, April 24, 2025.
https://hub.jhu.edu/2025/04/24/humans-better-than-ai-at-reading-the-room/

Honors, Awards & Scholarships

2025 Member, Sigma Xi, The Scientific Research Honor Society

2025 John I. Yellott Travel Award

2025 National Eye Institute Early Career Scientist Travel Grant

2024 ICML 2024 LatinX in AI Workshop Best Oral Presentation Award

2024 National Science Foundation (NSF) Graduate Research Fellowship

2024 Females of Vision et al. (FoVea) Travel and Networking Award

2022 Johns Hopkins University Keller Miller Fellowship

2020 Northwestern University Interdepartmental Neuroscience Research Fellowship

2017 Stanford University El Centro Latino Acknowledgement Undergraduate with Academic Honors

2016 Bay Area Graduate Pathways to STEM Symposium Trainee

2016 Stanford University Leadership Intensive Program Recipient

2013 Miguel Contreras Learning Complex Valedictorian

2013 Carnegie Mellon Celebration of Diversity Weekend Travel Awardee

2012 QuestBridge College Prep Scholar

Teaching

Spring 2024 Johns Hopkins University
Role: Teaching Assistant
Course: Cognitive Neuropsychology of Visual Perception
Lecture Instructor: Michael McCloskey
Prepared and graded exams and assignments

Fall 2023 Johns Hopkins University
Role: Teaching Assistant
Course: Cognitive Neuroimaging Methods in High-Level Vision
Lecture Instructor: Donald Li
Prepared and graded quizzes and assignments

Spring 2023 — Johns Hopkins University
Role: Teaching Assistant
Course: Reading the Mind: Computational Cognitive Neuroscience of Vision
Lecture Instructor: Donald Li
Prepared and graded quizzes and assignments

Fall 2020 — Splash at Northwestern University
Role: Teacher
Designed, programmed, and instructed an introductory course and exploration to high school students on the facets of recreating human intelligence in artificial systems through guiding principles in neuroscience, cognitive science, and artificial intelligence, with a focus on limitations, progress, and emerging methods.

Service & Outreach

2023 - Present — **Student Lead | Diversity and Representation Committee (DRC)**
Department of Cognitive Science, Johns Hopkins University
Led and facilitated departmental initiatives to enhance representation and equity for minoritized groups at all levels. Worked to create a more inclusive and supportive department climate, particularly for underrepresented groups in science, while also advocating for school- and university-wide anti-racist policies and initiatives.

2022 - Present — **Student Representative | Graduate Representative Organization (GRO)**
Johns Hopkins University
Student representative for the Department of Cognitive Science, advocating for graduate student interests, attending GRO meetings, and facilitating communication between students and university administration.

2016 - 2017 — **Intern Volunteer | Youth Policy Institute**
Partnership with Stanford HAAS Center for Public Service
Fostered STEM learning environments for children across low-income communities of Los Angeles in areas such as health & wellness and computer science by introducing many to logical online games that provide the basis for computer programming

2016 - 2017 — **Member | Stanford Latinos Unidos**
Stanford University
Organized community outreach programs to cultivate a more inclusive, diverse, and united Latinx community on campus, through social and cultural events about the various Latin American celebrations, our rich history, literature, art, and diverse community.

2016 - 2017 — **Co-Founder & President | Stanford Latinx Business Association**
Stanford University
Created and facilitated a student group focused on promoting diversity in corporations by building partnerships, finding community, and providing mentorship for underrepresented minorities, with a particular focus on members of the Latinx community who are interested in business, technology, and engineering.