

EUNICE YIU

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Employment

Sept 2025 - **University of California, Berkeley, Berkeley, CA**
present Postdoctoral Scholar, Department of Psychology
Advisor: Alison Gopnik

Education

Aug 2020 – **University of California, Berkeley, Berkeley, CA**
August 2025 Ph.D. in Psychology
Dissertation: Relational Reasoning in Children and Machines: Insights into Causal
Generalization and Innovation
Committee: Alison Gopnik, Jitendra Malik, Steve Piantadosi & Shiry Ginosar
Aug 2016 – **Cornell University, Ithaca, NY**
May 2020 B.A. in Psychology (Magna Cum Laude), Biological Sciences (Magna Cum Laude), and
Economics; Cumulative GPA: 3.996/4.0

Grants & Fellowships

2025-2026 **Canadian Institute for Advanced Research Next Generation Trainee Fellowship for the Learning in Machines & Brains program**
Amount: \$10,000 CAD

2025-2026 **7th Google - Berkeley Artificial Intelligence Research Commons Grant**
Title: Teaching Causal Tool Use to Vision–Language Models with Human Development Data
Amount: \$10,000

2025 **Departmental Semester Fellowship at UC Berkeley**
Amount: \$18,750

2024-2025 **6th Google - Berkeley Artificial Intelligence Research Commons Grant**
Title: Learning and Optimizing Causal Structures through Intrinsic Objectives: A Comparative Study of Human and Artificial Agents
Amount: \$41,000 (with \$20,000 in Google Cloud Credits)

2023-2024 **5th Meta - Berkeley Artificial Intelligence Research Commons Grant**
Title: A Curriculum for Foundational AI Models Inspired by Human Cognition
Amount: \$35,000

2023, 2025 **Berkeley Graduate Division Conference Travel Grant**
Amount: \$1,500 (each year)

Honors & Awards

2025	Society for Research in Child Development SECC Poster Competition Winner Poster Title: Thinking Step-by-Step Facilitates Visual Analogical Reasoning in Children and Adults
2023	Curiosity, Creativity and Complexity Conference Travel Award , Columbia University Poster Title: Discovering New Functions in Everyday Tools By Children, Adults and LLMs
2023	Computational Cognitive Models of Learning and Development Workshop Travel Award , Harvard University
2020	Phi Beta Kappa , Chapter of Cornell University Honor Society Membership for top 10% graduating class
2020	T.A. Ryan Award , Cornell University Best Undergraduate Honors Project in Psychology Thesis Title: Does Toddler Mental Rotation Relate to Their Processing Strategies and Play?
2020	Robert R. Capranica Award , Cornell University Undergraduate Research Award for Outstanding Thesis in Neuroethology Thesis Title: The Relationship between Spatial Occupancy Time & Firing Patterns of Hippocampal CA1 Neurons in Response to Changes in the Social Context

Publications

* equal contribution, † undergraduate mentee

1. **Yiu, E.**, Allen, K.R., Ginosar, S., & Gopnik, A. (in press). Empowerment Gain and Causal Model Construction: Children and adults are sensitive to controllability and variability in their causal generalization and interventions. *Philosophical Transactions of the Royal Society A*. (Special Issue: World models, A(G)I, and the Hard problem(s) of life–mind continuity).
2. Dahmani, A.*; **Yiu, E.***; & Gopnik, A. (2025). Children Spontaneously Design Curricula to Tackle Challenging Tasks. In *Proceedings of the Annual Meeting of the Cognitive Science Society* (Vol. 47).
3. **Yiu, E.**, Qraitem, M., Wong, C.†, Majhi, A. N.†, Bai, Y., Ginosar, S., ... & Saenko, K. (2025). KiVA: Kid-inspired visual analogies for testing large multimodal models. In *International Conference on Learning Representations*.
4. Goddu, M. K.*; **Yiu, E.***; & Gopnik, A. (2024). Causal relational problem solving in toddlers. *Cognition*, 254, 105959.
5. **Yiu, E.**, Kosoy, E., & Gopnik, A. (2024). Transmission versus truth, imitation versus innovation that large language and language-and-vision models cannot (yet). *Perspectives on Psychological Science*, 17456916231201401.
6. **Yiu, E.***, Sandbrink, K. J.*; & Gopnik, A. (2024). To observe or to bet? Investigating purely exploratory and purely exploitative actions in children, adults, and computational models. In *Proceedings of the Annual Meeting of the Cognitive Science Society* (Vol. 46).
7. Wu, W. Y.; **Yiu, E.**, Ophir, A. G., & Smith, D. M. (2023). Effects of social context manipulation on dorsal and ventral hippocampal neuronal response. *Hippocampus*, 33(7), 830-843.
8. **Yiu, E.**, Collins, J., & Gopnik, A. (2022). Three-Dimensional Object Completion in Humans and Computational Models. In *Proceedings of the Annual Meeting of the Cognitive Science Society* (Vol. 44).
9. Bambha, V. P., Beckner, A. G., Shetty, N., Voss, A. T., Xie, J., **Yiu, E.**, ... & Casasola, M. (2022). Developmental Changes in Children's Object Insertions during Play. *Journal of Cognition and Development*, 1-20.

Selected Conference Presentations

* equal contribution, [†] undergraduate mentee

1. **Yiu, E.**, Majhi, A.N.[†], Allen, K.R., Ginosar, S., & Gopnik, A. Children use both controllability and variability for generalization (2025). Poster presented at the 46th Annual Meeting of the Cognitive Science Society; 2025 July 30-August 2; San Francisco, USA.
2. **Yiu, E.**, & Gopnik, A. Thinking Step-by-Step Facilitates Visual Analogical Reasoning in Children and Adults (2025). Poster presented at the Society for Research in Child Development; 2025 May 3; Minneapolis, MN, USA.
3. **Yiu, E.**, Qraitem, M., Majhi, A. N.[†], Wong, C.[†], Bai, Y., Ginosar, S., Gopnik, A. & Saenko, K. KiVA: Kid-inspired visual analogies for testing large multimodal models (2025). Poster presented at the Thirteenth International Conference on Learning Representations; 2025 April 24; Singapore.
4. **Yiu, E.**, Qraitem, M., Wong, C.[†], Majhi, A. N.[†], Bai, Y., Ginosar, S., ... & Saenko, K. KiVA: Kid-inspired visual analogies for testing large multimodal models (2024). Spotlight talk presented at the Multimodal Algorithmic Reasoning Workshop at NeurIPS; 2024 December 15; Vancouver, Canada.
5. **Yiu, E.***, Qraitem, M., Wong, C.[†], Majhi, A. N.[†], Bai, Y., Ginosar, S., ... & Saenko, K. Kid-inspired visual analogies for testing large multimodal models (2024). Talk presented at the Fifth International Conference on Analogy (Symposium: *Has Analogical Reasoning Emerged in LLMs?*); 2024 July 23; Amsterdam, The Netherlands.
6. **Yiu, E.***, Sandbrink, K.*, Liu, E.[†], & Gopnik, A. To observe or to bet? Investigating purely exploratory and purely exploitative actions in children, adults, and computational models (2023). Poster presented at the 45th Annual Meeting of the Cognitive Science Society; 2024 July 24-27; Rotterdam, The Netherlands.
7. **Yiu, E.**, Goddu, M., & Gopnik, A. Causal-functional Reasoning in Children and AI (2024). Talk presented at the Functions, relations, and abstractions in infants, preschoolers, and AI Symposium at Cognitive Development Society Conference; 2024 March 23; Pasadena, CA, USA.
8. **Yiu, E.***, Sandbrink, K.*, Liu, E.[†], & Gopnik, A. Children prioritize purely exploratory actions in observe or bet tasks (2023). Poster presented at the Intrinsically Motivated Open-ended Learning Workshop at NeurIPS; 2023 December 16; New Orleans, LA, USA.
9. **Yiu, E.***, Dahmani, A.*, Lee, T. E., Ke, N. R., Kroemer, O., & Gopnik, A. Towards Understanding Automated Causal Curriculum Learning in Humans and Reinforcement Learning Agents (2023). Talk presented at the Interactive Causal Learning Conference; 2023 December 1-2; Boca Raton, FL, USA.
10. **Yiu, E.***, Dahmani, A.*, Lee, T. E., Ke, N. R., Kroemer, O., & Gopnik, A. Towards Understanding Automated Causal Curriculum Learning in Humans and Reinforcement Learning Agents (2023). Talk and poster presented at the 6th International Workshop on Intrinsically Motivated Open-ended Learning; 2023 September 13-15; Paris, France
11. **Yiu, E.**, & Gopnik, A. Discovering New Functions in Everyday Tools by Children, Adults and LLMs (2023). Poster presented at the Curiosity, Creativity and Complexity Conference; 2023 May 23-25; Columbia University, NY, USA.
12. **Yiu, E.**, & Gopnik, A. Object Exploration Influences Three-dimensional Object Completion Preferences in Children (2023). Flash Talk presented at Society for Research in Child Development Biennial Conference; 2023 March 23-25; Salt Lake City, UT, USA.
13. **Yiu, E.**, Collins, J., & Gopnik, A. Three-Dimensional Object Completion in Humans and Computational Models (2022). Talk presented at CogSci; 2022 July 28-30; Toronto, Canada.
14. **Yiu, E.**, Collins, J., & Gopnik, A. Symmetry Preference in 3D Object Completion (2022). Talk presented at From Neuroscience to Artificially Intelligent Systems (NAISys) Conference; 2022 April 5-9; Cold Spring Harbor Laboratory, NY, USA.

Invited Talks & Interviews

- Feb 2026 AI Capabilities and Alignment Consensus Project podcast (Invited Interview)
Jan 2026 Keynote at the Foundations of Agentic Systems Theory Workshop at AAAI, Singapore
Nov 2025 Cognitive Tools Lab (PI: Judith Fan), Stanford University, USA
April 2025 Computational Cognitive Development Lab (PI: Daphna Buchsbaum), Brown University, USA
March 2025 The Nature of Intelligence Workshop, Santa Fe Institute, USA
Feb 2025 Early Learning and Cognition Lab (PI: Caren Walker), UC San Diego, USA
Feb 2025 Computation, Cognition and Development Lab (PI: Tomer Ullman), Harvard University, USA
Oct 2024 Language and Cognition Lab (PI: Michael Frank), Stanford University, USA
June 2024 AI, Psychology and Neuroscience Summer Cluster, Simons Institute for the Theory of Computing, USA
May 2024 Brain Science and Large Language Models Symposium, Leopoldina and Max Planck Institute for Brain Research, Germany (media coverage: *Frankfurter Allgemeine Zeitung*)

Teaching Experience

Graduate Student Instructor

- Fall 2023 **PSYCH101: Research and Data Analysis in Psychology**
Instructor: Arman Catteron, UC Berkeley
Fall 2021 **PSYCH133: Psychology of Sleep**
Instructor: Matthew Walker, UC Berkeley

Undergraduate Teaching Assistant

- Spring 2019 – **PHYS1101-1102: General Physics I-II**
Spring 2020 Instructor: Nicholas Taylor, Cornell University
Spring 2019 **HD3620: Human Bonding**
Instructor: Cindy Hazan, Cornell University

Mentoring

Program Roles

- 2023-2025 Mentor, Research Experience Pathways, Berkeley Department of Psychology
2022-2024 Mentor, Summer Undergraduate Program in Engineering Research at Berkeley (SUPERB), Berkeley Artificial Intelligence Research

Mentorship Highlights

- Wei Gao (2023-2024): Master's student at Harvard University, Learning Design, Innovation & Technology Program
Miranda Zhang (2024): Master's student at Harvard University, Department of Education
Kai Hung (2022): PhD student at MIT, Institute of Data, Systems and Society
Fei Dai (2022): PhD student at UC Berkeley, Department of Psychology
Yuki Bian (2021-2022): Product Manager at Roblox
Iran Torres Aleman (2021-2023): Master's in Public Health at UC Berkeley, Class of 2025

Complete List of Mentees

Berkeley undergraduates ([†] supervised honors thesis)

Amaan Ali (present)

Anisa Noor Majhi (present)

Emma Gurevich (present)

Janna Umagat (present)	Kaydee Manikhong (present)	Ray Huang [†] (present)
Verena Ghobrial (present)	Syeon Min (present)	Nitya Sriram (2023-2025)
Shivalika Jhabua (2023-2025)	Benel Higuchi (2023-2024)	Yuna Lee (2023-2024)
Wei Gao (2023-2024)	Hillary Peng Sim (2023-2024)	Charlie Wong (2023-2024)
Sophia Liu (2022-2024)	Megan Lui (2021-2024)	Miranda Zhang (2024)
Azzurra Cappuccini (2022-2023)	Eileen Liu [‡] (2022-2023)	Iran Torres Aleman [‡] (2021-2023)
Luc LaMontagne (2021-2023)	Yuki Bian (2021-2022)	

Non-Berkeley undergraduates (summer interns)

Alexis Davis (2024; Howard University)	Kate Choi (2024; Yale University)	Linda Marie Trevino (2024; UT Austin)
Nicole Fan (2024; Cornell University)	Nora Chen (2024; UC San Diego)	Jalaya Allen (2023; Northfolk State University)
Xuan Ma (2023; Bard College)	Fei Dai (2022; UC San Diego)	Kai Hung (2022; Rice University)
Julia Olson (2022; University of Oregon)	Henry Lawrence (2021; Gonzaga University)	

Professional Service

Reviewer

Cognitive Science	Budapest CEU Conference on Cognitive Development (BCCCD), Cognitive Science Society (CogSci); Topics in Cognitive Science
Artificial Intelligence	Association for Computational Linguistics (ACL), Conference on Language Modeling (COLM), Conference on Computer Vision and Pattern Recognition (CVPR)

Co-Organized Workshops and Challenges

2026	Humans of Generative AI, Conference Workshop at Computer Vision Pattern Recognition (CVPR)
2026	Simons Institute for the Theory of Computing: AI, Psychology and Neuroscience Summer Cluster
2026	A Unified Account of Motivation in Development, Preconference Workshop at Cognitive Development Society (CDS)
2025	Kid-inspired Visual Analogies (KiVA) Challenge (multi-month competition), Guest Track Challenge at Google DeepMind's Third Perception Test Workshop, International Conference on Computer Vision (ICCV)
2024	AI & Cognitive Development, Preconference Workshop at Cognitive Development Society (CDS)

Professional Development

July 2024	Diverse Intelligences Summer Institute, St. Andrews, Scotland, UK
May 2023	Computational Cognitive Models of Learning and Development Workshop, Harvard University, Cambridge, USA
August 2022	Brains, Minds and Machines Summer Course, Woods Hole, USA

Programming Skills

- Python (PyTorch, NumPy, Pandas, Matplotlib, PyGame)
- R (statistical analysis, data visualization, Bayesian modeling with Stan)
- MATLAB (statistical analysis, computational modeling)
- JavaScript / jsPsych, HTML/CSS (online behavioral experiments and project sites)