

## RESEARCH SUMMARY

---

AI researcher and computational cognitive scientist bridging alignment, human cognition, and AI safety. Develops **interpretable, pluralistic, and steerable frameworks** for **LLM safety and agentic robustness**, integrating **reasoning, synthetic data, and human-grounded evaluation**.

## EDUCATION

---

<b>University of California, Berkeley</b> Ph.D. in Neuroscience with concentrations in Computation and Cognition, GPA: 3.97/4.00	Berkeley, CA 2021–2026
<b>Cornell University</b> B.A. in Computer Science and Mathematics, Minor in Cognitive Science, GPA: 4.01/4.30	Ithaca, NY 2017–2020

## WORK AND RESEARCH EXPERIENCES

---

<b>Anthropic</b> Research Fellow	Berkeley, CA November 2025 – May 2026
– Leading a research project on alignment and safety.	

<b>Amazon Web Services (AWS) — Agentic AI</b> Applied Scientist Intern	Seattle, WA May 2025 – August 2025
– Led research on <b>adversarial robustness</b> of tool-enabled LLM agents via multi-turn attack–defense evaluation.	
– Built scalable pipelines for <b>synthetic data generation and context engineering</b> in agent benchmarking.	
– Produced a <b>first-authored publication</b> and open-source benchmark on agentic AI safety.	

<b>Allen Institute for Artificial Intelligence (Ai2)</b> Research Intern	Seattle, WA May 2024 – August 2024
– Built <b>SafetyAnalyst</b> , an interpretable and steerable LLM safety moderation framework.	
– Designed multi-stage pipeline combining <b>reasoning, synthetic data, and model distillation</b> .	
– Resulted in a first-author <b>ICML 2025 paper</b> and open-sourced models, data, and code suite.	

<b>University of California, Berkeley</b> Ph.D. Researcher, Computational Cognitive Neuroscience Lab (Advisor: Anne Collins)	Berkeley, CA 2021 – 2026 (expected)
– Combines <b>reinforcement learning, Bayesian inference, and neural data</b> to model adaptive behavior.	
– Leads behavioral and modeling studies on <b>hierarchy, compositionality, exploration, and transfer</b> .	
– Created <b>latent state estimation frameworks</b> for cognitive model fitting.	
– Published in top journals including <b>Cognition</b> and <b>Journal of Mathematical Psychology</b> .	

## TECHNICAL SKILLS

---

- **Large Language Models:** Prompt Engineering, Synthetic Data Generation, Fine-Tuning, Evaluation, Red-Teaming, Model Behavior Analysis, Human-Centered Alignment, Crowdsourcing Pipelines
- **Machine Learning:** PyTorch, Hugging Face, TensorFlow, CUDA, Reinforcement Learning, Bayesian Modeling
- **Programming & Infrastructure:** Python, R, C/C++, Java, Bash, Git, Linux, HPC/Cluster Environments
- **Data Analysis:** NumPy, pandas, SciPy, Matplotlib, Regression Modeling, SQL, MATLAB

## GRANTS AND FELLOWSHIPS

---

• UC Berkeley ICBS Grant (\$4,000; <i>Co-recipient</i> )	2025–2026
• UC Berkeley ICBS Grant (\$5,000; <i>Co-recipient</i> )	2024–2025
• Society for Neuroscience Trainee Professional Development Award	2024
• CogSci Conference Travel Grant	2023
• Milton I. and Florence Mack Neurology Research Fund	2021–2022
• Summer Undergraduate Research Fellowship, Caltech	2018

## SELECTED PUBLICATIONS

---

- [1] **J.-J. Li**, J. Mire, E. Fleisig, V. Pyatkin, A. G. E. Collins, M. Sap, and S. Levine, “Pluriharms: Benchmarking the full spectrum of human judgments on ai harm”, in *ICLR*, 2026.
- [2] **J.-J. Li** and A. G. E. Collins, “Attentional dynamics reveal cognitive motivation and effort allocation”, in *PsyArXiv*, 2026.
- [3] **J.-J. Li**, J. He, C. Shang, D. Kulshreshtha, X. Xian, Y. Zhang, H. Su, S. Swamy, and Y. Qi, *STAC: When innocent tools form dangerous chains to jailbreak LLM agents*, 2025. arXiv: [2509.25624 \[cs.CR\]](#).
- [4] **J.-J. Li**, V. Pyatkin, M. Kleiman-Weiner, L. Jiang, N. Dziri, A. G. E. Collins, J. S. Borg, M. Sap, Y. Choi, and S. Levine, “SafetyAnalyst: Interpretable, transparent, and steerable safety moderation for AI behavior”, in *ICML*, 2025.
- [5] **J.-J. Li** and A. G. E. Collins, “An algorithmic account for how humans efficiently learn, transfer, and compose hierarchically structured decision policies”, *Cognition*, vol. 254, p. 105967, 2025.
- [6] **J.-J. Li**, C. Chen, and A. G. E. Collins, “Humans integrate heuristics and bayesian inference to efficiently explore under uncertainty”, in *Proceedings of the Annual Meeting of the Cognitive Science Society*, 2025.
- [7] T.-F. Pan, **J.-J. Li**, B. Thompson, and A. G. E. Collins, “Latent variable sequence identification for cognitive models with neural network estimators”, *Behavior Research Methods*, vol. 57, no. 10, 2025.
- [8] **J.-J. Li**, C. Shi, L. Li, and A. G. E. Collins, “Dynamic noise estimation: A generalized method for modeling noise fluctuations in decision-making”, *Journal of Mathematical Psychology*, vol. 119, p. 102842, 2024.
- [9] **J.-J. Li**, L. Xia, F. Dong, and A. G. E. Collins, “Credit assignment in hierarchical option transfer”, in *Proceedings of the Annual Meeting of the Cognitive Science Society*, 2022.

## SELECTED TALKS & PRESENTATIONS

---

- **Pluralistic and Personalized Safety Alignment Benchmark**, ICLR 2026 (Poster), Rio de Janeiro, Brazil
- **AI Agent Safety Social Panel**, ICML 2025 (Invited Panel), Vancouver, Canada
- **Interpretable LLM Safety Moderation**, ICML 2025 (Poster), Vancouver, Canada
- **Interpreting Human Judgments on AI Harm**, NeurIPS CogInterp Workshop 2025 (Poster), San Diego, CA
- **Heuristics and Bayesian Inference for Efficient Exploration**, CogSci 2025 (Talk), San Francisco, CA
- **Dynamic Noise Modeling in Decision-Making**, Cognitive & Computational Neuroscience in Development Group 2024 (Invited Talk), Würzburg, Germany
- **A Generalized Method for Dynamic Noise Inference**, CogSci Conference 2023 (Talk), Sydney, Australia
- **Credit Assignment in the Transfer of Hierarchical Options**, CogSci Conference 2022 (Talk), Toronto, Canada