

ZHONGHAO HE

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SUMMARY

I am Zhonghao. I work on AI alignment and human-AI interaction research. My previous work got accepted by NeurIPS, ICML, ACM FAccT, and ICLR (workshop), etc. My major interests are to build machines that help humans learn and think. Currently I focus on two things, to develop truth-seeking AI (Bayesian & coherent & making discoveries), and to solve “positive feedback loop” problems in tech products: LLM sycophancy, confirmation bias in reasoning models, social media echo chamber, and polarization. tinyurl.com/prevailai

RESEARCH EXPERIENCE

Research Engineer - CMU (Remote)	<i>Jan 2025 - Dec 2026</i>
Co-lead “Martingale Score”: We introduce a Bayesian statistical method to evaluate confirmation bias in LLM reasoning, with Profs Maarten Sap & Hirokazu Shirado	Link to Paper
Research Engineer - University of Washington (Remote)	<i>Oct 2024 - Jun 2025</i>
Co-led two papers: “The Lock-in Hypothesis”, and “Open Problems in AI Influence”, with Prof Max Kleiman-Weiner	The Lock-in Hypothesis Website

Researcher - University of Cambridge	<i>Dec 2023 - Jul 2025</i>
Worked on multiple projects on interpretability, alignment, and agentic safety, with Profs David Krueger, Yaodong Yang, Grace W. Lindsay, and Anya Ivanova.	

EDUCATION

University of Cambridge	<i>Sep 2022 - Jul 2025</i>
<i>Mst in AI Ethics</i>	
<i>Coursework: ML Safety, AI Alignment, AI Ethics, RL, Advanced DL, Algorithm and Data Structure, Mechanistic Interpretability, etc.</i>	
Stanford University	<i>May 2019 - Aug 2019</i>
<i>Cognitive Science Summer Semester</i>	
<i>Courses: Mathematics Foundation of Computing, Minds and Machines, Introduction to Neuroscience</i>	
Shantou University	<i>Aug 2014 - Jun 2019</i>
<i>BA in English and Linguistics</i>	
<i>Relevant Coursework: Linguistics, ML, Maths.</i>	

AWARDS AND GRANTS

UK AISI Alignment Project Finalist (Recommended by AISI to funding partners)	<i>2025</i>
Cosmos Grant on Truth-seeking AI	<i>2025</i>
Foresight Institute AI Safety Research Grant	<i>2025</i>
Lambda Research Grant	<i>2024</i>
Manifund Research Scholarship	<i>2023</i>
Open Philanthropy’s Graduate Scholarship	<i>2022</i>

PUBLICATIONS

- [1] **Z. He***, T. Qiu*, H. Shirado, M. Sap (2025) Stay True to the Evidence: Measuring Belief Entrenchment in LLM Reasoning via the Martingale Score. *NeurIPS 2025*.
- [2] T. Qiu*, **Z. He***, T. Chugh, M. Kleiman-Weiner (2025). The Lock-in Hypothesis: Stagnation by Algorithm. *ICML 2025*.
- [3] **Z. He***, T. Qiu*, T. Lin, M. Glickman, J. Wihbey, M. Kleiman-Weiner (2025). Position: AI Systematically Rewires the Flow of Ideas. *ICLR 2025 BiAlign Workshop*.
- [4] **Z. He***, M. Tehenan*, J. Achterberg, K. Collins, K. Nejad, D. Akarca, Y. Yang, W. Gurnee, I. Sucholutsky, Y. Tang, R. Ianov, G. Ogden, C. Li, K. Sandbrink, S. Casper, A. Ivanova, G. W. Lindsay (2024). Multilevel interpretability of artificial neural networks: leveraging framework and methods from neuroscience.
- [5] J. Ji, T. Qiu, B. Chen, B. Zhang, H. Lou, K. Wang, Y. Duan, **Z. He**, J. Zhou, Z. Zhang, F. Zeng, K. Y. Ng, J. Dai, X. Pan, A. O’Gara, Y. Lei, H. Xu, B. Tse, J. Fu, S. McAleer, Y. Yang, Y. Wang, S. C. Zhu, Y. Guo, W. Gao (2023). AI Alignment: A Comprehensive Survey. Under review at ACM Computing Surveys.
- [6] A. Chan, R. Salganik, A. Markelius, C. Pang, N. Rajkumar, D. Krasheninnikov, L. Langosco, **Z. He**, Y. Duan, M. Carroll, M. Lin, A. Mayhew, K. Collins, M. Molamohammadi, J. Burden, W. Zhao, S. Rismani, K. Voudouris, U. Bhatt, A. Weller, D. Krueger, T. Maharaj (2023). Harms from increasingly agentic algorithmic systems. *Accepted by ACM FAccT 2023*

PROFESSIONAL SERVICES

Invited Talks:

- Nov 2025 META FAIR
- Nov 2025 MIT
- Oct 2025 UK AI Security Institute
- Oct 2025 University of Chicago
- Sep 2025 Tsinghua University
- Jul 2025 University of Washington
- Feb 2025 Cambridge University

Mentoring:

- Jul 2025 – Oct 2025 Supervised Program for Alignment Research
- Jul 2025 – Oct 2025 Algoverse AI Safety Fellowship

Reviewing

Nov 2025 - IASEAI 2026

2025 Onwards - Transactions on Machine Learning Research (TMLR)