

Maijunxian Wang

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Education

University of California, Berkeley

BA in Cognitive Science (GPA: 3.977/4.0)

Berkeley, CA

Sep. 2025 – Jun. 2027 (expected)

University of California, Davis

BS in Cognitive Science (GPA: 3.981/4.0)

Davis, CA

Sep. 2023 – Jun. 2025

Research Experience

Grow AI Like a Child Research Team

Core Member & Cognitive Scientist

Remote

Apr. 2025 – Present

Egocentric Bias in Vision-Language Models (FlipSet) — *arXiv:2602.15892; CogSci 2026*

- Led Level-2 visual perspective-taking benchmark design (2D string stimuli, 180-degree rotation), isolating spatial transformation from 3D scene complexity.
- Ran 103 VLMs; analysis of systematic egocentric bias and compositional deficits (ToM / mental rotation in isolation vs. failure when integrated).

Assessing Perceptual Metacognition in Vision-Language Models — *CogSci 2026*

- Contributed to implicit vs. explicit confidence evaluation in VLMs on perceptual tasks.
- Supported analyses linking confidence signals to accuracy and calibration across VLM families and prompting conditions.

Physical Transformation & Conservation (ConservationBench) — *arXiv:2603.07109; ICML 2026*

- Helped build conservation probes (four properties, paired conserving/non-conserving); scaled to 23,040 questions across 112 VLMs.
- Supported controlled experiments (text priors, temporal resolution, prompting, sampling): VLMs near chance; weak transformation-invariant visual reasoning.

Cognitive Control & Conflict Resolution — *arXiv:2505.18969; MMRAgI @ CVPR 2026*

- Contributed to 4,410-task benchmark across seven conflict paradigms (Stroop, Flanker, realistic variants); congruency and scaling in 47 VLMs.
- Supported experiments linking model scale to conflict resolution under high conflict (human-like demand-resource dynamics).

Very Big Video Reasoning (VBVR) Team

Founding Member & Head of Infra Team

Remote

Nov. 2025 – Present

VBVR Dataset & VBVR-Bench — *arXiv:2602.20159; ICML 2026*

- Contributed to million-clip video reasoning resource (200 curated tasks, principled taxonomy); verifiable, rule-based / human-aligned scorers (not LLM-as-judge).
- Assisted scaling analyses linking data and benchmarks to generalization on unseen tasks.

Demystifying Video Reasoning — *arXiv:2603.16870; ECCV 2026*

- Supported probing / qualitative analysis of “Chain-of-Steps” denoising reasoning vs. frame-wise narratives; working memory, self-correction, DiT layer roles.

Publications

- M. Wang et al. (2026). *A Very Big Video Reasoning Suite*. *arXiv:2602.20159*. ICML 2026.
- D. Luo, Y. Li, M. Wang, T. Zhao, B. Wang, S. Wang, P. Feng, P. Rahmanzadehgervi, Z. Ma, H. Deng (2026). *Vision Language Models Cannot Reason About Physical Transformation*. *arXiv:2603.07109*. ICML 2026.
- R. Wang, Z. Cai, F. Pu, J. Xu, W. Yin, M. Wang, R. Ji, C. Gu, B. Li, Z. Huang, H. Deng, D. Lin, Z. Liu, L. Yang (2026). *Demystifying Video Reasoning*. *arXiv:2603.16870*. ECCV 2026.
- R. Ji, M. Wang, Q. Gao, Y. Li, H. Deng, D. Luo (2026). *Assessing Perceptual Metacognition in Vision-Language Models*. CogSci 2026.
- M. Wang, Y. Li, B. Wang, T. Zhao, R. Ji, Q. Gao, E. Liu, H. Deng, D. Luo (2026). *Egocentric Bias in Vision-Language Models*. *arXiv:2602.15892*. CogSci 2026.
- H. Sun, B. Wang, S. Yu, Y. Li, Q. Gao, H. Lyu, L. Huang, Z. Hong, J. Ge, Q. Ma, H. He, Y. Zhou, L. Guo, L. Mei, M. Wang, D. Luo, H. Deng (2025). *Probing Perceptual Constancy in Large Vision-Language Models*. *arXiv:2502.10273*. ES-Reasoning @ ICLR 2026.
- B. Wang, Y. Li, Y. Qiao, M. Wang, T. Zhao, Y. Sun, B. Deng, H. Deng, N. Vasconcelos, D. Luo (2025). *Increasing Computation Resolves Conflicts in Vision Language Models*. *arXiv:2505.18969v2*. MMRAgI @ CVPR 2026.
- M. Wang, R. Ji (2025). *AGI as Second Being: The Structural-Generative Ontology of Intelligence*. *arXiv:2509.02089*.