

Michael Simon

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RESEARCH INTERESTS

- Human-Centered AI, AI for Science and Mathematics, Scalable Oversight

EDUCATION

- **University of California, Los Angeles** Los Angeles, CA
PhD Student in Computer Science Sept. 2026 – Present
 - Advised by Eunice Jun
- **University of California, Los Angeles** Los Angeles, CA
Master of Science in Computer Science Sept. 2024 – June 2026
 - Advised by Eunice Jun. Thesis: *Towards Bidirectional Human-AI Scientific Reasoning: From Concept-Role Graphs to Negotiated Interpretation*
- **University of California, Los Angeles** Los Angeles, CA
Bachelor of Science in Computer Science Oct. 2020 – Mar. 2024

RESEARCH EXPERIENCE

- **Computation and Discovery Lab, UCLA** Los Angeles, CA
Graduate Student Researcher Feb. 2025 – Present
 - Designed Syrup, an intermediate representation for bidirectional human-AI scientific reasoning; developed it into an M.S. thesis
 - Built the accompanying interactive system and evaluated it through qualitative and quantitative user studies with researchers and PhD students
 - Contributing to a cross-departmental AI for Mathematics initiative: building systems that help mathematicians understand AI-generated proofs and use them to pose the next generation of research questions
- **VAIL Lab, UCLA** Los Angeles, CA
Undergraduate Researcher June 2023 – June 2024
 - Advised by Bolei Zhou
 - Diffusion models for synthetic driving scene generation; built unified terabyte-scale driving dataset combining 4K YouTube footage and open-source data; resulted in NeurIPS 2024 publication (SimGen)

INDUSTRY EXPERIENCE

- **Excavaite Inc** Palo Alto, CA
CTO & Co-founder Feb. 2024 – May 2026
 - Built terabyte-scale patent corpus with RaBitQ-indexed vector search (Postgres + Vectorchord) powering retrieval for downstream agentic workflows
 - Designed agentic systems for patent leakage risk prevention, automated patent drafting, and claim chart generation; instrumented automated evals to gate model and prompt changes
- **Confluent** Mountain View, CA
Software Engineer Intern, Kafka Metadata Team June 2023 – Aug. 2023
- **Meta** Menlo Park, CA
Software Engineer Intern, Metrics Platform Governance June 2022 – Aug. 2022
- **Agrofocal Technologies** San Jose, CA
Machine Learning Intern June 2021 – Nov. 2023

PEER-REVIEWED CONFERENCE PUBLICATIONS

- [C1] Yunsong Zhou, **Michael Simon**, Zhenghao Peng, Sicheng Mo, Hongzi Zhu, Minyi Guo, Bolei Zhou, “SimGen: Simulator-conditioned Driving Scene Generation”. In *Proceedings of the 38th Advances in Neural Information Processing Systems (NeurIPS 2024)*.

PRESENTATIONS

- “Measuring How Models Externalize Scientific Understanding as Reasoning Dependency Graphs”. Poster, *IPAM Workshop on Foundations of Interpretability*, Los Angeles, CA, Sept. 2026.
- “Syrup: An Intermediate Representation for Bidirectional Human-AI Scientific Reasoning”. Poster, *Amazon Research Day*, Palo Alto, CA, Apr. 2026.
- “Aligning Scientific Arguments as Conceptual Knowledge Graphs”. Poster, *Stanford Graph Learning Workshop*, Stanford, CA, Oct. 2025.

TEACHING EXPERIENCE

- **Teaching Assistant, University of California, Los Angeles** Los Angeles, CA
CS188: AI for Human Interaction (Instructor: J.D. Zamfirescu-Pereira) Spring 2026

MENTORING

- Research mentor to one M.S. student and several undergraduate researchers, UCLA 2025 – Present

PROFESSIONAL SERVICE

- **Conference Reviewer:** ICLR 2026