

Jevon Lipsey

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EDUCATION

2026 – 2031 (Exp.)	Colorado School of Mines , Golden, CO Ph.D. in Computer Science (<i>Focus: Human-Robot Interaction, MIRROALab</i>)	
2022 – 2026	Colorado College , Colorado Springs, CO Bachelor of Arts in Computer Science <i>Awards: Steven Janke Award for Outstanding Achievement in CS, Euclid Scholar, Dean's List (all semesters)</i> <i>Relevant Coursework: Software Design, Data Structures & Algorithms, Theory of Computation, Ubiquitous Computing, Applied Python, Robot Ethics, Linear Algebra, Probability & Statistics</i>	GPA: 3.92 / 4.00

PUBLICATIONS

- Collins, S., Morris, N. C., Diamond, M., Wills, M., **Lipsey, J.**, & Williams, T. (2027). Sweepless Dreams: Envisioning Social Robots to Support the Unhoused. *ACM/IEEE HRI '27*, Silicon Valley, CA. (Under Review).
- Zhang, Y., White, Y., Clark, D., Sanchez, J., **Lipsey, J.**, Hirst, A., & Heflin, J. (2025). High Quality Embeddings for Horn Logic Reasoning. *Proc. of Machine Learning Research (PMLR)*, 284:116–129. [[PMLR](#)]
- White, Y., **Lipsey, J.**, & Heflin, J. (2025). An Evaluation of Approaches to Train Embeddings for Logical Inference. *AAAI Conf. on Artificial Intelligence (AAAI-25)*, 39(28):29527–29528. [[AAAI](#)]

RESEARCH EXPERIENCE

Undergraduate Researcher MCURE Program (Colorado College)	June 2026 – July 2026
- Formulated Total Community Preservation (TCP), an HHI-adapted metric quantifying community of interest (COI) fractures in redistricting; proved TCP models pairwise probability that two randomly selected community members share a district. - Built Python geospatial pipeline (GeoPandas) intersecting Census VTDs with citizen-submitted and administrative COI boundary layers, constructing demographic-weighted dual graphs across Colorado. - Simulated 20M+ MCMC steps (GerryChain ReCom) across three chambers, demonstrating that optimizing for selective COI collections can swing congressional balance by 5% (0.43 seats).	
Undergraduate Researcher Lehigh University REU	June 2024 – Aug 2024
- Optimized neurosymbolic backward-chaining reasoners via embedding model tuning, reducing computational waste in mean nodes explored by 99% (published at AAAI-25 and PMLR 2025). - Enabled reasoner training on real-world Knowledge Bases (Olympics, Nobel) by implementing Grosz et al. algorithm for RDF/OWL Description Logic to Datalog rule translation. - Benchmarked training volumes (70K–1.3M triplets) and evaluated novel embedding strategies: balanced triplet mutation, repeated-term atom sampling, hard negative mining, and dimension expansion.	
Editor-in-Chief Research Assistant Oxford University Press	May 2025 – Aug 2025
- Researched Midwestern U.S. Hip Hop subculture under Dr. Heidi R. Lewis, analyzing regional identity, sound evolution, and socioeconomic indicators using Critical Race Theory and intersectional feminist frameworks. - Compiled primary/secondary source analyses for Oxford's Women & Gender Studies Bibliography; conducted field research in Berlin on Hip Hop's global diffusion and adaptation in diasporic communities.	

PROJECTS

Pocket8 (iOS App) JavaScript, Vue.js, Swift, Capacitor, WebAssembly, Git	GitHub
- Built an officially licensed PICO-8 companion app in collaboration with Lexaloffle Games, earning 6,000+ downloads. - Engineered custom iOS wrapper modifying Emscripten boot sequence to bridge WebAssembly with iOS file systems; developed quicksave functionality using compressed memory snapshots.	

SKILLS

Languages	Python (Proficient), Java, C, C#, SQL, R, JavaScript, HTML/CSS
Concepts	Machine Learning, Neurosymbolic AI, Logical Inference, MCMC Ensembles, Algorithm Design, OOP, HCI Principles
Frameworks & Libraries	PyTorch, Scikit-learn, GeoPandas, GerryChain, Pandas, NumPy, NetworkX, FastAPI, Vue.js, Three.js, LaTeX
Tools & Methodologies	Git/GitHub, Docker, WebAssembly, GIS/Geospatial Analysis, Experimental Design, Performance Benchmarking, Linux