JASPER LEE

678-717-8919 | leejasper851@gmail.com | Austin, TX 78734
leejasper851.github.io | github.com/leejasper851 | linkedin.com/in/jasper-w-lee

EDUCATION

The University of Illinois Urbana-Champaign, Urbana, IL — May 2030
PhD in Computer Science — GPA: N/A

The University of Texas at Austin, Austin, TX — May 2025
BS in Computer Science, Turing Scholars Honors Program — GPA: 3.98/4.00
BS in Mathematics

RESEARCH EXPERIENCE

Formally Certified Automation and Learning Lab, Urbana, IL (Advisor: **Prof. Gagandeep Singh**) — January 2026

- Will do research at the intersection of ML and formal methods, including on RLHF for coding LLMs

Illinois Theorem Provers Lab, Urbana, IL (Advisor: **Prof. Talia Ringer**) — August 2025 - Present

- Doing research on improving ML for formal theorem proving and LLMs for code reasoning
- Constructing a framework for fine-tuning an LLM to do proof repair across different software versions of the proof assistant Isabelle
- Exploring novel fine-tuning paradigms for improving LLMs' code reasoning (e.g. output prediction) capabilities
- Testing various techniques to train ML models to emulate fundamental structurally recursive algorithms

Trustworthy Intelligent Systems Lab, Austin, TX (Advisor: **Prof. Swarat Chaudhuri**) — August 2023 - May 2025

- Did research in automated theorem proving, LLM agents, and reinforcement learning
- Created, tuned, and evaluated an automated theorem prover that uses a series of LLM agents to generate Lean 4 programs and corresponding formal correctness proofs for the CLEVER benchmark (NeurIPS 2025)
- Helped create PutnamBench, an automated theorem proving benchmark of 640 problems from the Putnam Mathematical Competition, written in the proof assistants Lean 4, Isabelle, and Coq; the PutnamBench paper was accepted at NeurIPS 2024 and won the Best Paper Award at the AI for Math Workshop @ ICML 2024
- Worked on solving reinforcement learning problems with high reward by using pre-trained LLMs to choose actions

Speech, Audio, and Language Technologies Lab, Austin, TX (Advisor: **Prof. David Harwath**) — August 2022 - December 2024

- Did research on improving the performance of self-supervised audio ML models (HuBERT)
- Worked on an individual project to improve the efficiency of HuBERT using various methods, including fast Fourier transforms, cross-attention, and knowledge distillation

PROFESSIONAL EXPERIENCE

Jane Street Capital Software Engineering Internship, New York, NY — May 2024 - August 2024

- Implemented two software engineering projects in OCaml and Python, working with databases and data manipulation
- Presented both projects to my teams at the end

PUBLICATIONS

Amitayush Thakur, **Jasper Lee**, George Tsoukalas, Meghana Sistla, Matthew Zhao, Stefan Zetzsche, Greg Durrett, Yisong Yue, and Swarat Chaudhuri. **CLEVER: A Curated Benchmark for Formally Verified Code Generation**. In ***NeurIPS 2025*** *Datasets and Benchmarks Track*, 2025. URL https://openreview.net/forum?id=IbOacMF5qd.

George Tsoukalas, **Jasper Lee**, John Jennings, Jimmy Xin, Michelle Ding, Michael Jennings, Amitayush Thakur, and Swarat Chaudhuri. **Putnambench: Evaluating Neural Theorem-Provers on the Putnam Mathematical Competition**. In ***NeurIPS 2024*** *Datasets and Benchmarks Track*, 2024. URL https://openreview.net/forum?id=ChKCF75Ocd.

HONORS AND AWARDS

NSF Graduate Research Fellowship — Fall 2025 - Spring 2030

- National fellowship program for graduate STEM researchers, awarded $53,000/year for 3 years

Best Paper Award, AI for Math Workshop @ ICML 2024 — June 2024

- Best Paper Award at the AI for Math Workshop @ ICML 2024 for the paper "PutnamBench: A Multilingual Competition-Mathematics Benchmark for Formal Theorem-Proving"

SKILLS

Programming Languages: Python, C, C++, Java, Rust, Go, OCaml, Coq/Rocq, Lean 4, MATLAB, R, C#, x86/ARM assembly, Verilog
Technical/Computer Skills: PyTorch, TensorFlow, Jupyter Notebooks, Git, LaTeX, Linux, SQL, Unity
Additional Skills: Technical writing, Presentation