

JIAHAO XIA

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<https://jjjxia.github.io/>

EDUCATION

University of Maryland, College Park, MD Aug 2025 – May 2028
B.S. in Computer Science
Minor in Mathematics

Pennsylvania State University, University Park, PA Aug 2024 – May 2025
Electrical Engineering coursework (transferred)

RESEARCH INTERESTS

ML systems, compilers, optimization, formal verification, program analysis

PUBLICATIONS

- Xuyang Li*, **Jiahao Xia***, Ahmed Adnan, and Jingbo Wang. PSOUFFLÉ: Scaling Exact Probabilistic Logic Inference for Program Analysis. Under review to Formal Methods in Computer-Aided Design (FMCAD), 2026. *Equal contribution.

RESEARCH EXPERIENCE

Purdue University May 2025 – Present
Research Assistant Remote

Scalable Probabilistic Logic Inference for Program Analysis

- Scale probabilistic inference via specialization and independence reasoning for uncertain program analyses, including side-channel analysis, taint analysis under uncertainty, and probabilistic disassembly.

SELECTED PROGRAMS & FELLOWSHIPS

- PLMW Scholarship, *PLDI'26* 2026
- Fifteenth Summer School on Formal Techniques 2026
- Oregon Programming Languages Summer School 2026

RELEVANT COURSEWORK

Computer Science: Computer Systems, Discrete Mathematics, Data Structures, Algorithms, Data Science, Programming Languages

Mathematics: Introductory and Advanced Linear Algebra, Multivariable Calculus, Complex Analysis, Probability and Statistics

TECHNICAL SKILLS

- **Languages:** C/C++, Python, Java, OCaml, Datalog, LaTeX
- **ML Systems:** PyTorch, Triton
- **Program Analysis & Formal Methods:** Soufflé, ProbLog, Coq/Rocq, SMT solver
- **Systems & Tools:** Linux, Git, Docker, CMake, Bash, GDB