

ALAN WANG

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EXPERIENCE:

Software Developer Intern @ Jane Street

May – August 2024

- Worked with billions of trade orders submitted to the SEC
- Improved the efficiency and utilization of server's used by the entire firm

Computer Science Intern @ D. E. Shaw Research

May – August 2023

- Researching docking and non-equilibrium FE calculation methods
- Writing system software to run thousands of simulations on Anton3 ASICs
- Writing embedded code that achieves 2.5x speedup on docking simulations

Research Assistant @ FPSG Lab

September 2021 – Current

- Advised under Professor Chris Fletcher with collaborators across several institutions
- Exploring new microarchitectural side channel techniques and attacks
- Reverse engineering microarchitectural structures
- Declassiflow project: modelling non-speculative information flow to improve performance, implemented using LLVM

Research Aide @ Argonne National Lab

May 2022 – May 2023

- Working with NVIDIA's Bluefield-3 Data Processing Unit (DPU) for zero trust network architectures
- Finding critical errors by instrumenting Portable Batch System (PBS) for Argonne's extreme scale systems
- Developed and programmed a command line interface for Argonne's UserBase3 and used by all Argonne admins
- Designed and collected data for a Python concurrency research project for the Operations division director

Visiting Student @ Argonne National Lab

Feb – May 2022

- Led the design of a ROS2 interface for Argonne's self-driving lab
- Built key infrastructure for Argonne's self-driving lab

Undergraduate Research Assistant @ Northwestern University

Feb 2021 – June 2022

- Researched the vulnerability INTEL-SA-00086 to gain access to Intel's most secure piece of hardware (microcode project)
- Worked on the FPVM project led by Professor Peter Dinda

DoE College Bound Research Intern (CBRP) @ Argonne National Lab

June – August 2021

- Started the design of a ROS2 interface for Argonne's self-driving lab
- Created important building blocks for future work in Argonne's self-driving lab

SEAP Intern @ Office of Naval Research

June – August of 2019 and 2020

- Led the development of autonomous bomb-defusing robots
- Repaired a variety of programming errors related to navigation, object recognition, and arm manipulation

PUBLICATIONS:

- [Redacted], *planned for submission to computer security conference*
- [Redacted], first author, *under review at computer security conference*
- EMT, *to appear in OSDI '25*
- Peek-a-Walk, first author, *IEEE S&P (Oakland) '25*
- Declassiflow, second author, *ACM CCS '23*
- Mars Ice Thermal Harvesting Rig & ISRU Laboratory (MITHRIL), *ASCEND '22*

ACHIEVEMENTS:

- NSF GRFP Honorable Mention, 2025
- Bronze Tablet Scholar Award, UIUC, 2025
- Siebel Scholar Award, 2025
- Dean's List, UIUC's Grainger College
- 2nd Place Overall, NASA RASC-AL 2022 (published ASCEND '22)
- Round 2 qualifier, Google Codejam coding competition

EDUCATION:

BSMS in Computer Science, University of Illinois at Urbana-Champaign

2021-2025

- GPA: 4.0 Advisor: Professor Chris Fletcher
- Activities: Intramural soccer and volleyball, Triathlon club, and ACM mentor

COMMUNITY SERVICE:

- Taught a free month-long Java course to over 100 K-12 students in the Chicagoland area, June 2020
- Taught a free month-long competitive programming course to 30 K-12 students in the Chicagoland area, Jan 2021
- ACM Mentor – Helping incoming freshman transition to college life, June 2022 - Current