

Wayne (Shuai) Wang

wswang@umich.edu | Ann Arbor, MI

🌐 waynewang.me | 🌐 [waynew99](https://github.com/waynew99)

EDUCATION

University of Michigan, Ann Arbor

Ph.D. student in Computer Science and Engineering

Ann Arbor, Michigan

Aug. 2023 - May. 2028(exp.)

Middlebury College

B.A. with a Major in Computer Science and a Minor in Political Science

Middlebury, Vermont

Sep. 2018 - Dec. 2022

Cumulative GPA: 3.89 / 4.0 | **Major GPA:** 3.95

SKILLS

Programming Languages: C/C++, Java, Bash, JavaScript (TypeScript), Python, R, SML

Frameworks and Technologies: Linux (Arch, Debian), FreeBSD, React, PostgreSQL, Git

PROFESSIONAL EXPERIENCE

University of Michigan, Rackham Graduate School, Graduate Student Research Assistant

Sep. 2023 – present

- Working closely with advisor Prof. Roya Ensafi and other graduate students in the department, assisted research projects in areas including mobile application advertisement ecosystems, proxy-tool performance measurement, and congestion control algorithm performance evaluations.

Middlebury College – Computer Science Department, Assistant in Instruction, Fulltime

Feb. 2023 – Jun. 2023

- Facilitated the instruction of 12 computer science courses, providing comprehensive support to CS students regarding assignments, course materials, and personal study guidance. Conducted 15+ hours of weekly office hours, delivering individualized assistance and achieving a 9.6/10 rating in the department-wide anonymous evaluation.
- Collaborated effectively on the development of course materials and implemented 10 assignments for CS201 Data Structures, utilizing Java, Junit, and GradeScope. Led 10 lab and review sessions to enhance student comprehension.
- Orchestrated the student course assistants program, benefiting over 200+ students by competently managing 30+ student course assistants with 50+ weekly help sessions.

Xiaomi Technology, Software Engineer Internship, Intern

Jun. 2020 – Aug. 2020

- Engaged in the development of Mi Browser Android application using Java. Collaborated closely with UI/UX designers and product managers in an Agile team to deliver 10+ new features on 3 monthly major updates.
- Programmed defense mechanisms against malicious Drive-By downloads and DoS attacks, protecting 20,000+ users.
- Debugged critical application issues such as ANRs, memory leaks, and concurrency issues.

PUBLICATIONS

Research Report: On the Feasibility of Retrofitting Operating Systems with Generated Protocol Parsers

Research Assistant, Part-time

Jun. 2021 – May. 2022

- Performed manual static analysis on 1,500 lines of in-kernel protocol stack implementations for IP/TCP and USB on Linux, FreeBSD, and illumos to study the feasibility of retrofitting them with generated protocol parsers. Included manual control flow analysis. Analyzed and visualized the result.
- **Publication:** W. Wang and P. C. Johnson, "Research Report: On the Feasibility of Retrofitting Operating Systems with Generated Protocol Parsers," *2022 IEEE SPW*, 2022, pp. 198-207, doi: 10.1109/SPW54247.2022.9833857.
- Presented the project at the Eighth Workshop on LangSec at the IEEE S&P Conference.

AWARDS

Timothy T. Huang Award in Computer Science, Middlebury, VT

May. 2023

- Awarded to one graduating senior per year for outstanding research, academic excellence, and service to the Middlebury Computer Science Department.