Wayne (Shuai) Wang

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EDUCATION

Middlebury College   Middlebury, Vermont
*B.A. with a **Major in Computer Science** and a **Minor in Political Science***   Sep. 2018 - Dec. 2022
Cumulative GPA: 3.89 / 4.0 | **Major GPA:** 3.95
Relevant Courses: Operating Systems, Systems Programming, Networks, Compiler Design, Computer Architecture, Software Development, Systems Security, Data Structures, Artificial Intelligence, Data Science, Probability

SKILLS

Programming Languages: C/C++, Java, Bash, JavaScript (TypeScript), Python, R, SML
Frameworks and Technologies: Linux (Arch, Debian), FreeBSD, React, PostgreSQL, Git

PROFESSIONAL EXPERIENCE

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.

Middlebury College – Economics Department, *Full stack Developer*   Jun. 2022 – Aug. 2022
· Developed Econ Simulations, an interactive website for economics and statistics teaching, using React and Next.js.
· Designed and implemented 3 new simulation modules. Rehabilitated 8 bottlenecking computations, reducing their computation time by up to 2,000% and releasing the user interface meanwhile. Refactored the website of 15+ pages to be compatible with mobile devices.
· The newly developed modules are adopted in multiple college courses in economics and statistics by professors at Middlebury College and other higher education institutions.

Middlebury College – Computer Science Department, *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 Security and Privacy Workshops (SPW)*, 2022, pp. 198-207, doi: 10.1109/SPW54247.2022.9833857.
· Presented the project at the Eighth Workshop on Language-theoretic Security at the IEEE Security & Privacy Conference.

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.

PROJECTS AND LEADERSHIP

Full stack Developer, *MIMDB(Middlebury IMDB), Part-time*   Sep. 2021 – Jan. 2022
· Engaged in full stack development of MIMDB using React, Framer Motion, Next.js, and PostgreSQL to provide a content hosting and display platform for students and faculties at Middlebury College Film Department.
· Collaborated with team members in an Agile environment under the Scrum methodology and practiced test-driven development.