

Ian K. Hajra

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Motivated junior at Brown University studying Applied Mathematics and Computer Science, seeking a Software Engineering internship for Summer 2025. Skilled in C++, Rust, and systems programming, eager to contribute to impactful software projects.

EDUCATION

Brown University, B.S. Applied Mathematics - Computer Science Expected Graduation May 2026
Relevant Courses: Computer Networks, Design and Analysis of Algorithms, Applied Cryptography, Computer Systems, Data Structures and Algorithms, Object-Oriented Programming, Abstract Algebra, Linear Algebra, Statistical Inferencing
Partial Differential Equations, Ordinary Differential Equations, Multivariable Calculus
Ann Arbor Pioneer High School, 3.99/4.00 GPA Graduated with Honors | June 2022
AP Courses: Calculus BC, Computer Science A, Microeconomics, Macroeconomics, US History, Government

EXPERIENCE

InfoReady Corporation, QA Team Member Remote | Jun 2024 – Present

- Redesigned the companywide architecture of Regression Testing, improving efficiency, accuracy, and scalability
- Discussed approaches to utilize more widespread automated testing within the organization
- Conduct smoke tests and exploratory tests to ensure software quality and performance
- Full-time summer intern, part-time September onwards

Brown University Department of Computer Science, Teaching Assistant Providence, RI | Aug 2024 – Present

- Serve as an Undergraduate Teaching Assistant for CSCI 0330: Introduction to Computer Systems
- Update and enhance course materials, including a lab focused on concurrency and a project centered on implementing malloc, free, and realloc from scratch in C
- Facilitate three office hours per week to assist students with course content and foster a supportive learning environment

Brown University Department of Egyptology, Course Development Aid Providence, RI | May 2024 – Present

- Aid in the creation of online materials to facilitate improved learning for students in introductory Egyptology courses

Pioneer High School Bands, Camp Counselor Interlochen, MI | Aug 2022 - Aug 2024

- Seasonal in August each summer
- Supervised cabin of 10-15 high-school students with one other counselor
- Planned and ran musical sectionals of 10-15 students, coached and ran auditions
- Instructed ranks of 6-8 students in marching fundamentals

Faber Piano Institute, Administrative Assistant Ann Arbor, MI | Jul 2023 – Aug 2023

- Assisted in managing Faber Piano Adventures and Scores of Music stores
- Helped instructors transition to MyMusicStaff for lesson planning and scheduling
- Managed distribution of donated music scores throughout Ann Arbor

Musician, Self Employed Southeast Michigan | Mar 2019 – Aug 2023

- Hired to perform at local and community events as a jazz pianist and organist
- Functioned as bandleader for many such events

PROJECTS

DASSH: A Disguised Approach to Secure Shell

- Developed a custom SSH system with a partner that hides key generation from users, aimed at lowering the barrier to entry for secure communication
- Implemented primarily in C++, utilizing the CryptoPP library for cryptographic functions

Virtual IP System

- Collaboratively implemented an IP networking stack from scratch with a partner in Rust, utilizing Arc, etherparse, and ipnet
- Developed custom host and router programs, as well as a shared IP library
- Implemented network forwarding and RIP, using UDP as the link layer

Personal Website - hajra.net

- Created a personal website using HTML, CSS, and JavaScript to showcase projects and professional achievements

SKILLS & INTERESTS

Skills: Git, JIRA, Docker, Systems Programming, Network Programming, Cryptography, Concurrency, Test-Driven Development
Coding Languages: C++, C, Rust, Python, Java, NodeJS, x86 Assembly, HTML, CSS, Bash, MATLAB
Personal Interests: Rock Climbing, Jazz Piano, Baking