# 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*
- Conduct manual regression testing and new feature testing.
- Launched project to redesign the companywide architecture of Regression Testing, improving efficiency, accuracy, and scalability.
- Contributed to decisions to utilize more widespread automated testing within the organization.
- 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 software system 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:** Chess (1800+ Online Rating), Rock Climbing, Jazz Piano, Baking