Thee Ho

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Education

University of California, Berkeley — Berkeley, CA
Bachelor of Arts in Computer Science — *August 2019 – May 2023*

- Major GPA: 4.0/4.0, Cumulative GPA: 3.8/4.0
- UC LEADS Scholar (Research Scholarship)
- Courses: Algorithms, Data Structures, Operating Systems, Compilers, Computer Security, Programming Languages, Parallel Programming, Probability, Abstract Algebra, Machine Learning.

Work Experience

Microsoft | React, TypeScript, C#, Azure Functions, Azure Cosmos DB, .NET — Redmond, WA
Software Engineer Intern — *June 2022 - Current*

- Work on the Insider Risk Management tool as part of the Security & Compliance Organization.
- Develop functionality for administrators to bookmark logged events and search bookmark history of other users.
- Work with research teams to add automatic logging of bookmark data as user feedback to improve the product.

Harpoon Corp | Angular, TypeScript, Node.js, Express.js, MongoDB, CSS, HTML — San Diego, CA
Software Engineer Intern — *January 2022 – May 2022*

- Delivered a search functionality that integrates with third-party private container registry APIs.
- Created a feature for users to authenticate with third-party container registry providers.
- Designed reusable APIs for secure authentication and querying container registry data.
- Collaborated with the front end team to revamp the UI and added project sorting, dark mode, and tooltips.

Industrial Cyber-Physical Systems Center | C, C++, Lingua Franca, Git — Berkeley, CA
Research Intern — *June 2021 – August 2021*

- Worked on the Lingua Franca project, a coordination language for building real-time systems.
- Built concurrent programs to benchmark the Lingua Franca compiler against existing actor frameworks.
- Discovered a performance-critical bug affecting the Lingua Franca compiler's C target.

UC Berkeley College of Engineering | Python, Pandas, NetworkX, Scikit-Learn — Berkeley, CA
Research Intern — *January 2021 – May 2021*

- Worked with researchers to develop a linear programming algorithm for optimizing vehicle routes.
- Wrote scripts to automatically generate realistic benchmarks by querying and partitioning Open Street Map data.
- Resulting test files allow researchers to more efficiently fine-tune their optimization algorithms.

Berkeley EECS | C, RISC-V, GNU Debugger — Berkeley, CA
Course Staff — *June 2020 – August 2020*

- Led weekly lab sections for Introduction to Computer Architecture, reviewed over 200 students' projects.

Projects

PintOS Operating System | C, x86 Assembly, GNU Debugger — *Jan 2022 - May 2022*

- Collaborated in a team of four and built a simple operating system for the x86 instruction set architecture.
- Developed system calls to fork and wait for processes, as well as create and join threads.
- Implemented locks, semaphores and conditional variables with priority donation for user space programs.

Secure File Share | Golang — *November 2021 - December 2021*

- Built an end-to-end secure system for file storage and sharing utilizing public and symmetric key encryption.
- Designed the system to be efficient and scale with the number of files, users, and simultaneous user sessions.
- Wrote tests providing 100% coverage for file sharing, access revoking and efficient read/write functionality.

ChocoPy Compiler | Java, RISC-V — *September 2020 - December 2020*

- Worked in a team of three and built a compiler to compile a statically typed variant of Python to RISC-V.
- Created a three-stage compiler with support for syntax checking, type-checking and type inference.
- Built programs to parse input into an abstract syntax tree, annotate the syntax tree, and generate RISC-V code.

Technical Skills

Languages: Java, Python, TypeScript, JavaScript, C#, Golang, C , C++, SQL, HTML, CSS, Bash.
Technologies: Linux, Git, React, Angular, Node.js, Express.js, Azure Functions, Azure Cosmos DB, MongoDB, Pandas.