Hal Hoffmeyer

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EDUCATION

University of Michigan | Computer Science Major | 4.0/4.0 GPA August 2024 — May 2027
Coursework: Data Structures and Algorithms, Programming and Introductory Data Structures, Discrete Math, Applied Linear Algebra, Honors Introduction to Statistics and Data Analysis
Awards: William J. Branstrom Freshman Prize awarded to the top 5% of the Freshman class

EXPERIENCE

VOID Tech Club Front-end Developer | *Next.js, React, TypeScript, Tailwind, Vercel, AWS* September 2024 – Present

- Developing a reliable web app using Next.js for front-end development, AWS S3 for file management, and Vercel for database hosting to showcase music for a documentary.
- Led developer meetings to implement NextAuth for a secure login page.
- Mentoring junior front-end developers, providing guidance on React and Next.js technologies.

PROJECTS

ZProfile | *Next.js, React, JavaScript, Supabase* June 2025 – Present

- Creating a full-stack web app designed to streamline membership management and logistics for a professional fraternity using Supabase for database and Next.js for dynamic dashboards.
- Integrated the University of Michigan API to develop an interactive course directory with search, debounce, and filtering features using React hooks and Supabase, enabling members to track each other's course enrollments.
- Implemented a bug reporting system leveraging the GitHub REST API, automatically creating GitHub issues from user submissions, streamlining bug tracking and improving response time.

LaTeX Generator | *React, TypeScript, Tailwind* January 2025

- Built a dynamic React-based matrix LaTeX generator designed for linear algebra students, enabling users to interactively modify matrix dimensions, input values, and generate code using state management and components to enhance functionality.

Minesweeper | *React, TypeScript, Tailwind* December 2024

- Engineered a fully responsive Minesweeper game using React and TypeScript, implementing efficient state management with hooks and dynamic grid rendering for scalable layouts.
- Developed complex game logic, including recursive flood-fill algorithms, mine placement validation, and adjacency calculations, ensuring accurate and varied gameplay.
- Optimized UI performance and interactivity by leveraging modern CSS (grid, flexbox), real-time state updates, and keyboard event listeners for a seamless user experience.

Pong Clock | *C, OpenGL, GLFW* December 2024

- Developed a self-playing Pong game in C that displays the current time, implementing a seven-segment display, ball and paddle movement, collision detection, and trajectory calculation.
- Managed rendering with GLFW and OpenGL and game logic with an accurate timer.

Graphing Calculator | *JavaScript, HTML/CSS* September 2024

- Designed a mathematical evaluator and graphing tool using JavaScript and HTML to generate plots of functions.
- Evaluates expressions using stacks for operators and values to ensure correct operator precedence.

LEADERSHIP

Kumon: June 2023 — August 2024

- Kumon is an after-school learning program that teaches younger students math and reading skills. I guided students through their math and reading work and graded homework.

Languages: C/C++, Python, Java, JavaScript/TypeScript, HTML/CSS, R
Tools: React, Tailwind, Next.js, Git, Vim, Supabase, Vercel, Makefile, VS Code, IntelliJ
Certifications: N3 Japanese Language Proficiency Test