

Max Isom

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EXPERIENCE

Founding Software Engineer

Jan 2022 – Present

Seam

San Francisco, CA

- Wrote the foundation of Seam's main product, Seam Connect
- Owned the job queue and scaled from 0 to xxM jobs per day
- Wrote core logic to successfully program xxK access codes on IoT devices per day across 15+ manufacturers, using unreliable and often reverse-engineered APIs
- Introduced tooling to monitor and debug database performance, resulting in a 50% load reduction
- Worked with customers to design an ergonomic, user-story driven, HTTP RPC API
- Reverse engineered and wrote a Rust driver for a proprietary RS232 serial protocol
- Built a WebRTC (WHEP) based live IoT video streaming service with under 100ms of added latency end-to-end
- Routed, ordered, and developed on a custom embedded MIPS computer with an onboard cellular radio
- Built internal tooling from scratch to enable great DX, including a custom HTTP API framework used by every HTTP-based service at Seam
- Kept CI test times under 10m / commit

Freelance Software Developer

2021 – 2022

Upwork & Others

Remote

- Worked with a variety of clients primarily using React and TypeScript to glowing reviews (5/5 stars on Upwork):
“...Max consumed a UX design through Sketch and turned it into a responsive web app in record time.”

Research Assistant

Aug 2020 – Dec 2021

Michigan Tech University

Houghton, MI

- Developed web-based predictive text entry keyboard used in a 2021 study
- Simulated challenges faced by people using alternative input methods (e.g. eye tracking)
- Paper: [Accelerating Text Communication via Abbreviated Sentence Input](#) (Adhikary et al., ACL-IJCNLP 2021)

Software Development Intern

Apr 2019 – Aug 2020

JopeConnect

Remote

EDUCATION

Michigan Tech University

Houghton, MI

Bachelor of Science in Computer Science, Minor in Mathematics

Aug 2018 – May 2021

WRITINGS & PROJECTS

Applying 5 million pixel updates per second with Rust & wgpu

2023

- Built an efficient viewer program for `/r/place` utilizing Rust and wgpu
- Focused on optimizing performance and offloading work to the GPU via compute shaders

Michigan Tech Courses | *React, MobX, NestJS, Postgres, TypeScript*

2021

- Course scheduling & planning web app, laser-focused on UX
- Used by over 50% of the student body

XKCDY | *Swift, SwiftUI, TypeScript*

2020

- Native iOS viewer for xkcd, a popular webcomic, >5k installs

TuyAPI | *JavaScript*

2017

- Reverse-engineered a local network serial protocol to unlock the control of thousands of different cheap IoT devices
- Many, many active community projects based on initial work, including widely used integrations for Home Assistant, Homebridge, and ioBroker

TECHNICAL SKILLS

TypeScript, JavaScript, Embedded development, Python, Rust, React, Next.js, Node.js, CI/CD, Linux, Git, Swift, Docker, SQL, Postgres, Reverse engineering, Keyword matching