Alex Sklar *Software Engineer*

📍 Portland, Oregon ✉ hello@alexsklar.dev 🔗 alexsklar.dev ⬡ sklarfox

I'm a full stack software engineer with an excitement for everything systems: designing, tinkering with, understanding, building, and optimizing them. Even my hobbies involve tinkering with systems; rock climbing (rope systems), being an amateur barista (coffee systems) and playing Factorio (automation systems).

💼 TECHNICAL EXPERIENCE

Syncosaurus, *Creator, Software Engineer* ⬀ 2024 — present

An open-source, serverless framework for real-time, collaborative web applications.

- Engineered a WebSocket communication back end system that enables automatically-synchronized shared state for up to 50 clients and long-term persistent storage
- Substantially reduced the size of inter-client messages via delta updates
- Developed a React SDK that supports optimistic user interface updates, automatic background synchronization, and flexible conflict resolution
- Reduced outbound WebSocket messages from O(N^2) to O(N) by migrating from an event-driven to time-driven messaging model
- Built an embeddable web application demo with automatic real-time collaboration utilizing the Syncosaurus framework, tested with ~30 concurrent live users
- Created a command line tool that automates the process of scaffolding a new project with Syncosaurus or integrating Syncosaurus into an existing React application from over 20 steps into a single command
- Contributed to a responsive time-series metrics dashboard backed by a GraphQL endpoint that aggregates data from one Cloudflare GraphQL endpoint and two REST endpoints
- Authored a comprehensive technical case study demonstrating the problem domain and engineering solutions syncosaurus.github.io/case-study ⬀

Full Stack Software Engineer 2021 — 2024

Developed various open-source projects including:

- Request Dumpster: Tool for collecting and viewing webhooks (Droplets, Nginx, MongoDB, Node.js, Express, React)
- Digital Envelopes: A personal finance budget application (Ruby, Sinatra, PostgreSQL)

Atmosfera Visualization, *Founder, Visualization Artist* 2016 — present

A digital illustration firm that produces images of unbuilt architecture.

- Established a full production pipeline for a team of up to 3 artists, including a multi-terabyte cloud asset library
- Optimized workflows reducing the average production hours from 36+ to 20 per illustration

🎓 EDUCATION

Launch School ⬀ 2021 — 2024

A multi-year, mastery-based software engineering curriculum that teaches from first principles.

Portland State University 2009 — 2013

Bachelor of Arts in Architecture

🧠 SKILLS

Front End
JavaScript, TypeScript, React, Tailwind CSS, WebSockets, MaterialUI, Handlebars, Bootstrap, WebSockets, jQuery

Back End
Node.js, Express, Go, Ruby, Sinatra, PostgreSQL, MongoDB, REST APIs, GraphQL

Cloud
Cloudflare (Workers, Durable Objects), AWS (EC2, S3, Lambdas), Heroku, Digital Ocean Droplets

Other
Git/GitHub, Jest, Object Oriented Programming, Nginx, Postman, IT Operations