

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, with a particular interest in distributed systems and cloud native applications. I love designing, tinkering with, understanding, building, and optimizing any kind of system. Even my hobbies involve them; rock climbing (rope systems), being an amateur barista (coffee systems) and playing Factorio (automation systems).

SKILLS

Front End — JavaScript, TypeScript, React, Tailwind CSS, WebSockets, MaterialUI, Handlebars, Bootstrap, 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, Unix, IT Operations

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, built with Cloudflare Durable Objects, that enables automatically-synchronized shared state for up to 50 clients and long-term persistent storage
- Reduced the size of inter-client messages by over 90% 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
- Completely automated the onboarding process through the creation of a command line tool, reducing 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 

Atmosfera, Founder, Software Engineer, 3D Artist

2016 — present

Established a multi-service firm providing 3d visualization, IT solutions, consulting, and contributed to multiple open-source software projects.

- Built and lead a team of 4 professionals, fostering a collaborative work environment
- Optimized workflows reducing the average production hours for 3d imagery from 36+ to 20 per illustration
- Developed a multi-terabyte cloud asset library with automatic file synchronization
- Expanded company services for an average revenue increase of approximately 20% YoY
- Open-source project contributions include:
 - Webhook Gravity Well: Tool for collecting and viewing webhooks (Nginx, MongoDB, Node.js, Express, React)
 - Digital Envelopes: A personal finance budget application (Ruby, Sinatra, PostgreSQL)

EDUCATION

Portland State University

2009 — 2013

Bachelor of Arts in Architecture