Alex Sklar

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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).

💼 PROFESSIONAL EXPERIENCE

Syncosaurus, *Founding Partner, Software Engineer* ⧉ 　　　　　　　　　　2024 — present

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

- Engineered a WebSocket communication backend system which 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
- Optimized 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 into a single command
- Contributed to a responsive time-series metrics dashboard backed by a GraphQL endpoint that aggregates data from one Cloudflare GraphQL endpoints and two REST endpoints
- Collaborated with a remote team of four engineers
- Authored a comprehensive technical case study demonstrating the problem domain and engineering solutions, available to read at 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

Other — Git/GitHub, Jest, OOP, Nginx, Postman, ITOps