

Zachary Martin

San Francisco, CA | zachsm@alumni.stanford.edu
GitHub | LinkedIn | Portfolio

Software engineer working across full-stack applications, machine learning, and computer graphics. Stanford Computer Science graduate and former NCAA gymnast.

EDUCATION

Stanford University | *B.S. in Computer Science*

2019 - June 2024

- Graphics concentration
- Selected coursework: Object-Oriented Systems Design · Algorithms · Web Development · Probability for Computer Science

TECHNICAL SKILLS

Languages: TypeScript, JavaScript, Python, C++, SQL, Swift, Java

Applications: React, Next.js, Node.js, SwiftUI, Redux Toolkit, GraphQL

ML & graphics: PyTorch, NumPy, ONNX, Computer vision, Path tracing, Three.js

Data & delivery: PostgreSQL, Supabase, AWS Lambda, DynamoDB, S3, GitHub Actions, Playwright

WORK EXPERIENCE

Reframe | *Product engineer*

August 2025 - present

- Build customer-facing onboarding, scheduling, live coaching, and internal support tools across Next.js applications and Python and Node.js AWS Lambda services.
- Developed scheduling workflows with coach availability, time-zone handling, calendar synchronization, and atomic slot reservation to prevent double bookings.
- Built Snowflake-backed product analytics with a chart-to-SQL compiler, funnels, retention, cohorts, and saved analyses.
- Consolidated independently deployed dashboards into a pnpm monorepo with shared UI and API packages, automated tests, and change-aware deployments.

Dr. Ruby | *Co-founder & engineer*

May 2025 - August 2025

- Led product design and engineering for a skincare and wellness platform, including a Swift iOS app and a React Native clinic client for patient progress and documentation.
- Developed AI-assisted routine tracking and a YOLOv8 computer-vision pipeline for acne and facial-feature detection, with attention to confidence thresholds and variation across skin tones.
- Iterated on Figma prototypes and product workflows using feedback from users and dermatology professionals.

Bay Coding Club | *Computer science tutor*

May 2025 - August 2025

- Taught Java and Python to beginner and intermediate students, covering programming fundamentals and problem solving for AP Computer Science and USACO.

PROJECTS

RayTrace - Computer graphics & machine learning

- Built a multithreaded C++ path tracer with BVH acceleration, OBJ/MTL meshes, reflective and refractive materials, caustic photon mapping, and a progressive viewer.
- Trained a U-Net on 2,304 renderer-generated examples and integrated ONNX inference into C++. Evaluated 360 test images from five held-out layouts against raw rendering and existing denoisers.
- Built seeded datasets, portable training checkpoints, and native/Python inference parity checks for image-reconstruction experiments.

C++20 · Python · PyTorch · ONNX Runtime · SDL2

Kumo - Collaborative visual editing

- Built a browser design editor with vector drawing, boolean operations, multi-selection, grouping, transforms, snapping, and auto layout.
- Implemented reusable components, linked instances, variants, shared styles, variables, and interactive prototypes across screens and boards.
- Integrated Liveblocks collaboration, Supabase persistence, and Firebase Authentication with server-side access checks, version checkpoints, and reviewable offline recovery.

TypeScript · React · Redux Toolkit · Liveblocks · Supabase · Vite

Site DNA - Browser analysis & developer tooling

- Built a website analyzer for rendered structure, design tokens, responsive layouts, motion, and accessibility signals across routes and UI states.
- Developed a Chrome companion for user-directed capture of signed-in products, resumable coverage tracking, and exports identifying captured, failed, and excluded routes.

TypeScript · Next.js · Playwright · Chrome DevTools Protocol

Unfiled - Notes, organization & private AI

In development

- Develop native iOS and web clients with quick capture, reviewable AI organization, and undo that preserves original text; encrypted local storage and separate backend organization, indexing, verification, and retrieval services.

SwiftUI · TypeScript · Next.js · PostgreSQL

ATHLETIC EXPERIENCE

Stanford Men's Gymnastics | *Student-athlete & vault event leader*

2019 - 2023

- Three NCAA team championships (2021-2023) and three NCAA All-American honors (2020-2022).
- MPSF individual vault champion (2023); two-time MPSF All-Academic and two-time CGA All-America Scholar-Athlete.
- Led the vault group and balanced training, travel, and competition with a Computer Science degree.