

Tobias Fu

San Francisco, CA | 646-744-4902 | 3tobiasfu@gmail.com | tobiasfu.com | [GitHub: realtobyfu](https://github.com/realtobyfu)

EDUCATION

Tufts University

Medford, MA

B.S. in Computer Science

September 2021 – May 2025

- Relevant coursework: **Machine Learning**, **Reinforcement Learning**, Algorithms, Software Engineering
- Independent LLM study with Peter Nadel (Tufts Tisch Data Lab): a weekly reading group from transformer architecture through RAG, agentic orchestration, and **sparse autoencoders** — the research behind Vitals.

EXPERIENCE

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San Francisco, CA

Technical Co-Founder | Swift, SwiftUI, React Native, TypeScript backend (App Store)

May 2026 – Present

- Building a social platform for candid dating stories with a co-founder: shipping features on both React Native and **native iOS** — especially iOS — and maintaining the TypeScript backend.
- Leading the port to **Swift/SwiftUI**: rethinking navigation and interactions for iOS rather than transliterating the React Native prototype (kept for Android).
- Shape **moderation policy** for a sensitive social space; integrated **Sentry** + **PostHog** monitoring and analytics.

Vybes App Inc.

Remote

iOS / Full-Stack Developer | Swift, SwiftUI, NestJS, TypeScript, Redis, AWS

February 2025 – June 2025

- Updated the **membership onboarding** features of an iOS dating app serving **1,000+** users ahead of its marketing push — new **SwiftUI** views alongside the original UIKit codebase.
- Improved the **matching algorithm** and fixed bugs across the matching and video-call flows (**Agora SDK**); worked on the NestJS/Redis backend.

Develop for Good

Remote

Software Engineer Intern | React, TypeScript, Node, SQL

May 2024 – August 2024

- Led a cross-functional team of **7 engineers** building a web application for **500+ therapists**; drove API design, database schema decisions, and feature prioritization.

PROJECTS (CASE STUDIES AT [TOBIASFU.COM/PROJECTS](https://tobiasfu.com/projects))

Commonplace | TypeScript, Next.js, Postgres/pgvector, Temporal, Groq (live demo)

2026

- A long-context AI workspace that makes a model's **working memory visible and steerable** over a 1.75M-word corpus: watch context assemble as answers stream, pin what matters, and click any claim through to the exact passage in memory.
- Durable ingestion via a **Temporal workflow** with idempotent steps — tested against worker restarts; standing **evals** for faithfulness, retrieval, and routing.

Vitals | Python, Next.js, Gemma Scope SAEs (live demo)

2026

- A real-time **LLM interpretability** instrument: streams a model's internal SAE features (sycophancy, user distress, crisis) token by token; steering runs as a controlled experiment whose negative results get published.
- Feature funnel: contrastive mining across 16,384 features, cross-validated against Neuronpedia; flagship crisis feature separates crisis from mundane messages at **AUROC 0.96**.

ProustGPT | Python, FastAPI, LangChain, Pinecone, Cohere (live, open source)

2024 – Present

- Redesigned a single-flow RAG chatbot over 12,544 bilingual passages into a **two-mode product** — separate tool budgets and endpoints, with a complexity router choosing between fast RAG (~2–3s) and a ReAct agent (~5–15s).
- Retrieval measured on a hand-reviewed gold set (111 questions, held-out test split): **Recall@5 0.82**, **MRR 0.69**, p50 551 ms — including a variant that beat baseline in tuning, regressed on held-out, and is reported anyway.

Grove | Swift, SwiftUI, AppKit, SwiftData (App Store)

2026 – Present

- AI knowledge workspace for macOS & iOS, largely built by an **autonomous agent loop** run against specs I wrote — nothing landed unless it built. iOS port: **28 commits in ~3 hours**. Presented at CocoaHeads SF (Mar 2026).
- Also shipped solo: **Fieldnote** (on-device CoreML plant ID), **Clockwise** (Screen Time API focus timer), **Write-It-Down** — all on the App Store.

TECHNICAL SKILLS

AI engineering: RAG pipelines, embeddings, agentic orchestration (LangChain/ReAct), eval design, SAE interpretability, agent-driven development workflows

Web & backend: TypeScript, React, Next.js, Node/NestJS, Python, FastAPI, Postgres/pgvector, Redis, Temporal, AWS, Docker, CI/CD

Apple platforms: Swift, SwiftUI, AppKit, SwiftData/CoreData, Swift Concurrency (async/await, actors), CoreML/Vision, Screen Time API, App Store lifecycle

BEYOND CODE

WWOOF — **volunteer farmer** (June 2025 – April 2026): organic farms in England, France, New Hampshire, Maine, and Hawaii, weeding, tilling, harvesting vegetables and fruit, caring for animals, shipping the projects above from the road.