

VEDAANT RAJESHIRKE

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SUMMARY

Software engineer who ships whole products alone, from native iOS clients to Python backends and production infra. Recently shipped Antara, an offline-first multilingual poetry app (SwiftUI, FastAPI, PostgreSQL). Founded IceBroker and grew it to 250+ users as its only engineer. Also works in real-time graphics and simulation (C++, OpenGL, WebAssembly). Authorized to work in the US on OPT, no H-1B sponsorship required until 2029.

EXPERIENCE

IceBroker

September 2022 - March 2024

Founder and Sole Engineer

Mumbai, MH, India

- Grew a hyper-local iOS and Android dating app to 250+ users through on-campus and peer marketing across Mumbai colleges, plus distribution partnerships with local bars and venue vendors.
- Held 60fps map interaction on low-end Android and iOS devices by rebuilding the render pipeline and state management.
- Owned architecture, releases and growth solo, building real-time matching on Firestore and Cloud Functions.

University of Southern California

August 2025 - May 2026

Grader, Graduate Game Development

Los Angeles, CA

- Graded 50+ Unity projects and ran 100+ code reviews on architecture, performance and gameplay systems.

PROJECTS

Antara | antara.vedaant.dev

August 2026 - Present

Swift 6, SwiftUI, SwiftData, FastAPI, PostgreSQL, pgvector, Cloud Run

- Shipped an iOS app for reading, logging and publishing poetry in English, Hindi and Urdu, rendering Latin, Devanagari and right-to-left Nastaliq, with poems stored as structured couplets, stanzas and lines.
- Made the app work offline with a SwiftData store and an outbox that replays writes on reconnect, using idempotency keys on every mutation and a typed network layer with retry-with-jitter and token refresh.
- Built multilingual semantic search on pgvector embeddings and deployed on Cloud Run and Neon through GitHub Actions, with nightly encrypted backups, a tested restore, a budget kill switch and Sentry.

CineGraph | cine-graph-three.vercel.app

April 2026 - May 2026

Next.js, TypeScript, FastAPI, PostgreSQL, pgvector

- Built a film recommendation agent that explains its picks, using a RAG pipeline that turns Letterboxd exports and TMDb metadata into vector embeddings.
- Designed structured tool interfaces for discovery, history analysis and suggestions, and instrumented the system for retrieval quality, latency and tool usage.
- Built the Next.js front end with async request states, loading and error boundaries, and incremental rendering so results appear as the agent returns them.

Physically-Based Jello Simulation | vedaant.dev/jello

February 2026 - March 2026

C++, OpenGL, WebAssembly, WebGL

- Kept a 3D mass-spring network stable under RK4 integration where explicit Euler diverged, with penalty-based collisions and grab-and-fling interaction through screen-space raycasting.
- Ported it to WebAssembly and WebGL to run in the browser, with a custom translucent render path and spring toggles.

Ostinato | ostinato.pages.dev

December 2025 - April 2026

SwiftUI, AVFoundation, NaturalLanguage, React, TypeScript

- Built an iOS and macOS EPUB reader that scores each page with background music, using on-device semantic search over a 160-theme audio library generated offline with MusicGen.
- Crossfades only on persistent mood shifts, and ported the app to a React and TypeScript web reader at full parity.

SKILLS

Languages: Swift, Python, TypeScript, JavaScript, C++, Objective-C, Dart, GLSL

Apple and Mobile: SwiftUI, SwiftData, AVFoundation, AVAudioEngine, NaturalLanguage, Flutter, Firebase

Backend and Infra: FastAPI, PostgreSQL, pgvector, RAG, Firestore, Cloud Run, Neon, Cloudflare, Vercel, GitHub Actions, Sentry

Web and Graphics: Next.js, React, OpenGL, WebGL, WebAssembly, Unity

EDUCATION

University of Southern California, Master's, Computer Science

August 2024 - May 2026

University of Mumbai, Bachelor's, Computer Engineering

August 2020 - May 2024