

JAY HEO

Full-Stack Software Engineer

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Full-stack engineer building Ecco's cross-platform streaming app — web, mobile, and an airline in-flight entertainment build — with frontend work in React/React Native and backend work in Go and Node. Diagnosed onboarding drop-off and shipped a guest-mode rework that raised Day-1 retention from **25% to 75%**, and led the IFE build that put the product in front of **18 airlines**, including Lufthansa and Etihad.

Technical Skills

Languages: JavaScript, TypeScript, Go, Python, Java, SQL

Frontend / Mobile: React, Next.js, React Native, Expo, Zustand, Redux, Context API, Tailwind CSS, TanStack Virtualizer

Backend / Infra: Node.js, Express, GraphQL, Apollo, REST APIs, WebSocket, MQTT, PostgreSQL, Prisma, AWS S3

Tools: Docker, AWS, Firebase, Datadog RUM, Amplitude, GitHub Actions, NGINX, Postman, Jira, Figma

Experience

Ecco, Inc. — *Software Engineer* | Irvine, CA | Apr 2025 – Present

- Noticed users dropping off during onboarding, so **rebuilt the app's auth model around a guest state** — browsing, search, and playback work without an account, while saving or profile access trigger a sign-in modal. Removing the signup requirement raised Day-1 retention from **25% to 75%**.
- Ported the web app to run inside an airline's in-flight entertainment hardware** — an old Qt-based browser with very little CPU or memory to spare — and built an MQTT-based remote control so a separate device could drive it. Demoed at the Aircraft Interiors Expo in Germany, which led to follow-up meetings with **18 airlines** including Lufthansa, Etihad, and Saudia.
- Led the React Native upgrade** from 0.76 (past end-of-support) to 0.84 alongside React 19 and Expo 55 — driven by upcoming Android 16 KB page-size requirements for Google Play and a native dependency stack (expo-video replacing expo-av, FlashList v2, Reanimated v4) that was moving New-Architecture-only. Used **~490 existing tests** to catch regressions across iOS and Android.
- Rebuilt voice search** around a proper speech-recognition state machine — stable vs. interim transcripts, distinguishing intentional stops from dropped connections, auto-restart with rate limiting — which drove a **30% increase** in searches after launch.
- Diagnosed and fixed a rare race condition** in the video feed that only reproduced under rapid scrolling: the index tracked from user events and the index TanStack Virtualizer managed internally could drift apart, causing the wrong video to play. Fixed by centralizing feed state in Zustand.
- Built the Go backend and Redis-based session logic** for the analytics event pipeline (handling events that require a user_id vs. ones fired pre-login), and shipped the app's first monetization path — a subscription payroll with full Stripe integration for checkout, subscription status, and webhook-driven entitlements.

ShineResumes (Team Project) — *Full-Stack Engineer* | Tustin, CA | Jul 2024 – Nov 2024

- Migrated the backend from REST to GraphQL/Apollo** so the frontend could fetch exactly what each resume section needed instead of over-fetching or hitting multiple endpoints.
- Built the AI resume generation flow** — calculating available line space before generation, plus keyword tracking so bullets don't repeat themselves across a resume.
- Moved resume file storage off the database and onto S3** with pre-signed URLs for previews and downloads.

Preps (Y Combinator S2024, Final Round) — *Front-End Engineer & Project Lead* | Fullerton, CA | Dec 2023 – Jun 2024

- Built the real-time mock interview flow** — Next.js dynamic routes talking to the AI backend over WebSockets.
- Split coding questions from general interview prompts** before they hit the AI, which made responses noticeably more relevant.
- Cut AI response latency from 5–10 seconds to near real-time:** the original pipeline recorded full audio, transcribed it with Whisper, sent the text to the OpenAI API, then played back the reply. Rebuilt it to stream audio over WebSockets in chunks and stream AI responses back token by token, after benchmarking faster inference options like Groq.
- Coordinated project timelines and sprint planning** with a Kanban workflow to hit each milestone ahead of Y Combinator's application deadline, iterating on the product from user feedback to ship a polished, user-friendly app for review.

Mustadd (Contract) — *Software Engineer* | Los Angeles, CA | Aug 2022 – Aug 2023

- Built a portfolio view** that pulled a user's on-chain holdings and calculated average cost basis, current value, and unrealized gains/losses against live prices; cached CoinGecko responses and polled on pull-to-refresh to work around a low API rate limit.
- Added QR-code-based actions** tied to the user's wallet address, surfacing different options depending on what the scanned code represented.

Education

IBM AI Developer Professional Certificate | Jan 2025

CodeSmith — Software Engineering Immersive | 2022

University of California, Santa Barbara — Bachelor of Arts, Sociology; Technical Management Program Certificate | 2014 – 2019

Additional

Fluent in Korean • Portfolio: heo.one