

Yeonguk Lee

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Summary

Software engineer who builds AI agents that take over manual operational work, grounded in backend fundamentals, with one shipped App Store backend and a verification-first agent measured end to end.

Experience

CLIR · Food-Label Scanner, live on the App Store

Mar 2026 – Present

Global PBL Program, Full-Stack & AI Track · backend owner, 4-person team · Irvine, CA

- Own the backend: one barcode/OCR scan returns a safe or not-safe verdict against the user's dietary profile.
- Shipped a perceptual-hash dedup cache to production, cutting up to 4 paid API calls to 0 per repeat scan; repeat photos of the same label never hash identically, so exact-match caching could not work.
- Prevented community-feed cache stampede with TTL jitter, stale-while-revalidate, and a distributed lock.

Frontend Developer, Conever · Kookmin University Alpha Project

May 2025 – Sep 2025

Seoul, South Korea

- Led the frontend track on a team-built travel app and shipped it to ONE Store (Korea) in 2025.

Projects

Sellii · AI Agent for Resale Arbitrage

Mar 2026 – May 2026

Sole developer · agent pipeline, server-side verification, measurement harnesses

- Built an agent to scan three marketplaces daily, pricing finds against eBay sold comps with estimated net profit.
- Blocked 17/17 fabricated price claims with 0 false positives in a 44-fixture harness, recomputing every economic figure server-side; prompt-only checks had accepted all 17.
- Committed each event exactly once in a replay harness where a naive pattern committed up to 40 times.
- Cut projected LLM spend 98.8% and vision calls from 31 to 0, measured on a 31-listing fixture (12/15 recall).

FlowCraft · Multi-Agent Flutter App Builder

Mar 2026 – Present

Sole developer · agent orchestration, deterministic code generation, verify-repair loop

- Six LLM agents emit typed state for a deterministic Flutter code generator; no raw LLM-written code ships.
- Contains bad generations with a verify-repair loop: static validation, capped repairs, prior-state fallback; 53 tests.

LiveTrack · Self-Hosted Real-Time Group Location Platform

Apr 2026 – Present

Sole developer · WebSocket server, PostGIS data layer, VPS deployment

- Hand-wrote the WebSocket layer over using a managed realtime service; self-hosted the full stack on one VPS.
- Classified failures by retryability, with distinct handling paths for partially completed operations.

Technical Skills

- **Languages:** TypeScript, JavaScript, Dart, Python, SQL
- **AI / LLM:** OpenAI API (GPT-4o Vision, Function Calling), multi-agent pipeline design
- **Backend / Data:** Node.js (Fastify, ws), PostgreSQL, PostGIS, Redis, BullMQ, Drizzle ORM
- **Security / Auth:** OAuth2 (PKCE), JWT (OIDC), idempotency design
- **Infra / DevOps:** Docker, Docker Compose, Playwright, Railway, Hetzner VPS
- **Frontend / Mobile:** React, Next.js, React Native (Expo), Flutter, Zustand

Education

Kookmin University, Seoul, South Korea · B.S. in Computer Science

Expected Feb 2028