

Sihyeong Lee

Forward Deployed / AI-Native Product Engineer | TypeScript / Python | Agentic Systems | Production Integration

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US permanent resident, authorized to work without sponsorship. **Los Angeles based | Open to on-site/hybrid work and frequent U.S. domestic travel.**

Available immediately | Full-time

Summary

Engineer and former CTO with ten years of shipping software and nearly five years owning production systems and engineering outcomes. I use **Claude Code, Codex, and custom agents as execution leverage while retaining ownership of architecture, code review, testing, debugging, and production results.** Strongest in ambiguous 0-to-1 work: understand a messy operation, build across frontend/backend/infrastructure, integrate existing systems, and put measurable quality gates around what ships. I also have first-hand U.S. manufacturing-floor experience, including an on-site QA role.

Experience

Founder & Software Engineer, Sourcea LLC | Los Angeles

Nov 2025 - Present | Los Angeles / Remote

Solo consultancy and product lab for AI integration, agent tooling, and full-stack systems.

- Build **MCP servers and agent workflows** that connect LLMs to GPU generation backends, databases, project trackers, and deployment infrastructure, with typed tool calls, automated gates, and human approval where judgment should remain human.
- Use **Claude Code, Codex, and isolated git-worktree sessions** for parallel implementation while I own architecture, diff review, test strategy, failure analysis, and release decisions; validate with Playwright, Vitest, pytest, and task-specific evaluation harnesses.
- Build LLM features together with retrieval benchmarks, deterministic validation, LLM-judge safety evals, and A/B tests instead of treating model output as inherently correct.
- Operate PostgreSQL/pgvector, Docker, self-hosted GPU services, cloud VMs, Tailscale, Caddy, and Cloudflare across production and development environments.

Chief Technology Officer, Bitnara Inc. (ITEMBOX) | AI-assisted e-commerce platform

Jun 2024 - Oct 2025 | Remote

Owned the product end to end and led a **nine-person distributed engineering team across Korea and Vietnam** while remaining its most active contributor.

- Owned a **NestJS/TypeORM backend with 20 API modules and roughly 300 REST endpoints** behind a Next.js frontend, covering multi-tenant workspaces, role-based permissions, team invitations, order workflows, proxy purchasing/quoting, and exchange-rate services.
- Replaced manual seller onboarding with **Shopify OAuth 2.0** and a Cafe24 integration; implemented HMAC validation, token storage, webhook registration, multi-currency stores, and cross-exchange-rate handling.
- Shipped **Stripe subscription billing** with renewal and payment-failure webhooks and operated the AWS footprint supporting the platform.
- Integrated image generation, background removal, translation, and OCR through **ComfyUI, ModelsLab, Kling, OpenAI, and Anthropic**, with FastAPI services, Redis/Celery workers, PostgreSQL, and MongoDB.

Chief Technology Officer, GEOMEC Inc.

Feb 2021 - May 2024 | Remote from the U.S. from 2023

Sole engineer responsible for internal software and infrastructure.

- Designed and shipped an **ElectronJS desktop client** with automated release, update, and logging pipelines.
- Built NAS-backed file services with role-based access, **Proxmox VE** virtualization, automated VM provisioning, and snapshot backups.
- Operated Linux servers, VPN, firewall rules, SSH key management, centralized logging, and internal network-security standards.

Quality Assurance, Case Farms Processing, Inc. | Morganton, NC

Mar 2023 - Mar 2024 | On-site

- Worked directly on a U.S. manufacturing floor; started in production and **moved into quality assurance after five months.**
- First U.S. W-2 role and day-to-day English-language workplace; continued GEOMEC CTO responsibilities remotely outside plant hours.

Independent Development & Study

2014 - 2020

Self-directed product work and occasional client projects while completing an associate degree and bachelor's degree.

Selected Projects

DevDeck | local-first command center for coding agents (*open source*)

TypeScript | Electron | React | Node.js | Vitest | Playwright

Built to operate Claude Code, Codex, and Antigravity sessions across many repositories. DevDeck exposes repository/session state, context and usage signals, embedded terminals, cross-project tasks, and direct machine-to-machine session control. Public CI reports **1,257 passing tests** across a cross-platform release pipeline with multilingual, accessibility, and failure/recovery checks.

studios | multi-modal MCP platform on a shared kernel

Python | MCP | FastAPI | React | SQLite | ComfyUI | CUDA

A shared-kernel platform for image, video, 3D, voice, and music generation. Tools own generation and machine validation; semantic judgment is returned through `verify_asset`, making agent decisions persisted and inspectable. Services run against a remote GPU host over ssh-stdio and a Tailscale mesh.

Production infrastructure | cloud-to-self-hosted migration and operations

Docker | PostgreSQL | PowerShell | WSL2 | Cloudflare | Tailscale

Migrated **nine HTTPS services plus a public application database from Oracle Cloud to a self-hosted GPU workstation**, with a Cloudflare/WSL2 reverse-proxy path, scheduled service watchdogs, nightly Oracle + Google Drive backups, guarded remote execution, and a documented disaster-recovery path.

Technical Skills

AI / Agentic: Model Context Protocol (MCP), Claude API / Claude Code, OpenAI / Codex, Google Gemini, tool calling, agent orchestration, RAG, pgvector, cross-encoder reranking, LLM-judge evals, deterministic quality gates

Frontend: TypeScript, React, Next.js, Electron, React Native, Three.js, Tailwind CSS

Backend / Data: Node.js, NestJS, Python, FastAPI, PostgreSQL, MongoDB, Prisma, TypeORM, Redis, Celery, SQLite, PostGIS

Infra / Delivery: Docker, AWS (EC2, RDS, S3, Route 53, IAM), GitHub Actions, Proxmox VE, Playwright, Vitest, pytest, Tailscale, Caddy, Cloudflare, Vercel, PowerShell

Education & Languages

Hanyang Cyber University, B.S. in Computer Software Engineering, 2017-2019 | **Korea National Institute for Lifelong Education**, Associate degree in Computer Engineering, 2013-2016

Korean (native) | English (professional working)