

DongYeop Lee

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EDUCATION

University of Southern California, B.S. in Physics/Computer Science, GPA: 4.0/4.0 December 2028

- **Honors & Awards:** Dornsife Dean's List, Phi Kappa Phi Recognition Award, USACO Platinum Division
- **Member:** ShiftSC, ScopeSC, HackSC, Avenues Consulting Club

PROFESSIONAL EXPERIENCE

Hemut (YC P25)

Software Engineer

Fresno, CA

April 2026 – Present

- Hardened database-tool access in a 9-organization PostgreSQL environment with transaction-scoped RLS, and reduced recorded driver-dashboard query time by 95% through LATERAL lookups and primary-key joins.
- Reduced cold API latency from 516ms to 50ms using stale-while-revalidate feature-flag caching, background refreshes, and startup prewarming.
- Added pre-rollout migration gates for 3 AWS ECS services and PostgreSQL-backed CI that rebuilds the schema from scratch, fixing 4 distinct migration bootstrap failure modes.

Sense AI (a16z)

Founding Software Engineer

Los Angeles, CA

September 2026 – Present

- Built a retry-safe dispatch pipeline for a 25-team multi-tenant platform (TypeScript, Postgres): compare-and-set test claims and unique-constraint send reservations stop concurrent workers from contacting a tester twice.
- Engineered a private media upload for team stimuli: signed upload URLs, a 5-type content allowlist checked against the stored object, canonical UUID paths, and 2-hour view links, so no team can read or overwrite another team's files.

KrootMe

Founding Software Engineer

Los Angeles, CA

September 2026 – Present

- Hardened PostgreSQL authorization with function permissions and booking-state guards, reducing successful unauthorized operations from 7/10 to 0/10 in synthetic regression tests while preserving legitimate workflows.
- Built a deterministic job-enrichment pipeline integrating Greenhouse, Lever, and Ashby APIs, extracting compensation and sponsorship with source evidence, ambiguous-match rejection, and failure-aware retries.

IDX Exchange

Natural Language Processing Engineer

Los Angeles, CA

February 2026 – May 2026

- Implemented hybrid property search using MiniLM embeddings, FAISS cosine-similarity retrieval, and BM25 keyword ranking, combining normalized scores to return ranked listings with structured property signals.
- Raised entity-extraction micro-F1 from 78.2% to 88.1% and reduced false-positive price extractions 75% on a fixed synthetic benchmark through spelled-number handling and contextual filtering.

PROJECTS

[Mend](#) | *Swift, Supabase, PostGIS, PyTorch, Core ML*

Finalist, F26 Origin Hackathon

- Built a crowdsourced infrastructure-inspection app in 72 hours (SwiftUI, Supabase, PostGIS, 4 Deno Edge Functions); added an offline outbox with idempotent retry keys so a re-sent report never files or pays twice.
- Matched each photo to the asset the camera faces by ray-casting its compass heading against OpenStreetMap building footprints within 50 m, falling back to the nearest footprint when the ray misses.

[EcoPrompt: AI Energy Efficiency](#) | *Next.js, React, TypeScript, AWS Bedrock, DynamoDB, Tailwind CSS*

- Developed EcoPrompt, a Next.js and TypeScript AI chat app on AWS Bedrock (Titan embeddings) and DynamoDB, featuring semantic-deduplication caching, prompt-complexity-based model right-sizing, and a real-time energy dashboard.
- Cut per-query LLM energy consumption by up to 98.6% on cache hits and 90% on right-sized queries, quantified via EPA eGRID factors.

TECHNICAL SKILLS

- **Languages:** Python, Java, C++, TypeScript, JavaScript, SQL, Bash, HTML, CSS
- **Backend & APIs:** FastAPI, REST APIs, Node.js/Express, PostgreSQL, Redis, DynamoDB (NoSQL), SQLAlchemy, Alembic, Pydantic, pandas
- **Cloud & DevOps:** AWS (S3, ECS/Fargate, ECR, RDS, DynamoDB, Secrets Manager, Bedrock), AWS CDK, Docker, Kubernetes, Linux, Terraform, GitHub Actions, CI/CD, Git, Claude Code, Codex, GitHub Copilot
- **Frontend & Testing:** React, Next.js, Tailwind CSS, Zustand, Zod, pytest, Jest, Vitest