

Richard Lee

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Professional Summary

Customer facing solutions architect and technical lead translating operating requirements into deployed agentic AI systems. Led two engineers and partnered with a US client CTO on production delivery across three AWS architecture iterations. Built enterprise POCs for financial services and utilities spanning cloud architecture, full stack implementation, security, observability, evaluation and human approval.

Technical Skills

Architecture and cloud: AWS, Lightsail, Lambda, Aurora Serverless, Bedrock, S3, ECR, IAM, Cognito, Secrets Manager, VPC, Route 53, CloudWatch, Athena and PostgreSQL.

AI and delivery: CrewAI, Copilot Studio, FastAPI, Next.js, Docker, GitHub Actions, AWS OIDC, OpenTelemetry, Arize Phoenix, grounding, evaluations, guardrails, idempotency and human approval.

Integrations and automation: Stripe, Zoho Sign, Mixpanel, Telnyx, Resend, Caddy, OAuth2 Proxy and Playwright.

Experience

Chief Architect | IntelWave AI

Apr 2026 – Aug 2026

- Led two engineers and partnered directly with a US client CTO to architect and operate a production agentic platform designed for a client target of millions of daily interactions.
- Implemented three AWS architectures across distributed Lightsail, Lambda with Aurora Serverless and consolidated Lightsail; reduced measured monthly standby cost by roughly 75 percent in the scale to zero iteration before consolidation removed chained cold starts and operational complexity.
- Delivered CrewAI orchestration with FastAPI, Next.js, PostgreSQL and Bedrock services, separating probabilistic outputs from validated records, idempotent operations and human approval before consequential external actions.
- Built immutable delivery controls using GitHub Actions, AWS OIDC, digest pinned ECR images, activation health checks and forward recovery, then prepared a controlled AWS account transition.
- Deployed an Azure legal POC monitoring 32 approved sources with grounding, citations and prompt injection controls; all 24 final evaluations passed.
- Deployed a utilities POC with a parent coordinating 17 child agents across operations, finance close and execution readiness, with human approval for consequential actions.

Senior Engineer | TeleMedC

Sep 2024 – Nov 2025

- Led a confidential medical device from R&D concept to a market viable prototype through 27 design iterations across hardware, software and product architecture.
- Designed a production grade PCB and integrated mechanical, embedded, peripheral and application systems, improving image quality and user experience while reducing assembly time and complexity.
- Planned procurement for 30 components to maintain availability and reduce stockout risk during rapid development.
- Established an AI assisted embedded workflow using GitHub Codespaces for rapid iteration and deployment across embedded systems.
- Authored interface documentation and pin configuration diagrams as a technical source of truth supporting product, QMS, ISO and medical device licensing work.
- Served as regulatory documentation liaison, supporting licensing checks and interpretation of relevant QMS and ISO requirements.

Founder | Peasy Labs

Jan 2020 – Aug 2024

- Operated a venture lab across customer discovery, requirements, hardware and software prototyping, ecommerce, sourcing and market strategy; conducted more than 100 customer interviews.
- Sourced and validated IMU and Time of Flight sensors, fabricated proof of concept models and evaluated WebRTC, RTOS, embedded communications and cloud system approaches.
- Tested 2,500 SKUs and processed 500 goods across ecommerce operations. A one month ecommerce test generated SGD 10,000 in sales.
- Designed payment, inventory, order tracking, identity, business verification and compliance workflows while evaluating product and operating constraints.
- Used business level Mandarin to negotiate directly with Chinese suppliers, reducing selected component costs by over 30 percent and securing custom hardware orders.

Associate Product Manager | Shopee

Aug 2019 – Dec 2019

- Translated requirements into an internal data monitoring platform supporting accounting compliance and executive reporting, then coordinated implementation with technical product managers in China.
- Conducted 15 field interviews across Greater Jakarta on mobile prepaid balance and data package purchases to inform product direction for the micro enterprise unit.

Internship Experience

Four regional product and strategy internships covered German and Italian localization across multiple platforms, Google Data Studio dashboards using Amazon Redshift data, cross functional PayPal delivery, ecommerce product requirements and industry transformation research across Southeast Asian markets.

Product Management Intern | Rakuten Viki | Localization and Redshift analytics

Sep 2018 – Jan 2019

Product Management Intern | Photobook Worldwide | Cross functional PayPal delivery

Jul 2018 – Aug 2018

Product Management Intern | Shopee | Requirements and implementation guidance

Jun 2017 – Aug 2017

Infrastructure Solutions Division Intern | Enterprise Singapore | Industry research

May 2016 – Sep 2016

Recognition and Presentations

Recognition: AWS AI Engineering Community Builder; contributed perspectives to CNBC and The Business Times.

Architecture presentations: Presented agent systems at Amazon, Tencent, Stripe, SMU, ACCA, ISCA, AI Summit Seoul, SuperAI, Legal Benchmarks and OpenClaw Singapore.

Technical topics: Covered agent orchestration, identity, memory, observability, guardrails, payment workflows, governed finance and AWS deployment.

Selected builds: Delivered MimiClaw on ESP32 and demonstrations spanning medical triage, legal research, financial reporting, business opportunity research, autonomous robotics, CAD and PCB generation, agent payments and multilingual manufacturing negotiation.

Education

Bachelor of Engineering (B.Eng.), Computer Engineering | Singapore University of Technology and Design (SUTD)

May 2015 – May 2020

Cum Laude | Rolls Royce capstone delivered 35 percent under budget.

Semester Exchange, Computer Engineering | Pohang University of Science and Technology (POSTECH)

Aug 2017 – Dec 2017