Christian Yongwhan Lim

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CHIEF ARCHITECT | AI SYSTEMS RELIABILITY | TECHNICAL LEADERSHIP

AI systems architect and engineering leader with fifteen years across Google, Two Sigma, and startups, turning real-time agents into dependable business workflows through explicit state, evaluated tool use, observability, and recovery.

PROFESSIONAL EXPERIENCE

Chief Architect | Probook

Sep 2026-present | AI operating system for home services

- Lead cross-functional architecture and production delivery for the real-time voice path: streaming speech, orchestration, tool execution, workflow state, observability, latency, and recovery.
- Shipped state validation, idempotent tool calls, interruption recovery, and human handoff across booking and record-write flows, protecting them from duplicate, stale, and partially completed actions.
- Built workflow evaluation and trace review that turn production failures into release gates and owned remediation.

VP Engineering | Arklex AI

May 2025-Aug 2026 | Agent-first platform

- Architected and led the open-source Agent-First Organization framework: task-graph execution, orchestration, distributed workers, and production observability.
- Unified Shopify, HubSpot, and RAG delivery paths; aligned platform and agent teams through typed APIs, CI, monitoring, security review, mentoring, and hiring standards.

Founder and principal engineer | Startup roles

Apr 2023-Apr 2025 | New York

- **CEO & Co-Founder | Stealth AI Venture** | Oct 2024-Apr 2025 - raised initial funding and built the agent-automation infrastructure and go-to-market foundation from zero.
- **Principal Engineer | Fun.xyz** | Jul-Sep 2024 - rebuilt production test infrastructure and acceptance gates for high-volume transaction paths.
- **Co-Founder | Christian and Grace Consulting** | Apr 2023-Jul 2024 - delivered technical consulting and mentoring.

Senior Quantitative Software Engineer | Two Sigma

Jul 2022-Feb 2023 | Derivative modeling and trading systems

- Implemented fixed-income quantitative strategies plus alerting and analytics tools that improved visibility into execution-system behavior.

Research Software Engineer and Tech Lead | Google

Oct 2016-Jun 2022 | Ads, Brain, TensorFlow Runtime, ML Research

- Built production software in Google Ads and Core (2016-2019), then shared infrastructure for deep-learning research workloads and TensorFlow Runtime (2019-2021).
- Led applied ML from experiment through product integration, coordinating research and engineering delivery (2021-2022).
- Tech lead for Google Kick Start Practice Rounds (2020-2021); the broader Kick Start program reached 110,000+ participants worldwide.

CORE CAPABILITIES

AI systems: agent architecture | real-time voice | tool execution | workflow state | evaluation | observability | recovery
Platforms: LLM APIs | streaming speech | RAG | Shopify | HubSpot | distributed systems
Stack: Python | C++ | FastAPI | LangChain | PostgreSQL | Redis | Docker | AWS | CI/CD

SELECTED TECHNICAL WORK

Persona reliability measurement

Independent multi-model evaluation | 2026

- Passed 80/80 reproducibility checks and quantified context-length stability across six dimensions: 250-token windows tracked full-document scores at Pearson r=0.91-0.96, versus r=0.71-0.76 at 100 tokens.

Cascade centrality

With Josh Alman | Submitted to ITCS 2027

- Submitted an exact-complexity and approximation result; built exact-rational enumeration and explicit counterexamples for follow-on structural and network-augmentation work.

ICPC contest engineering

Chief Judge, Mid-Central | 2026

- Led delivery of 14 Division 2 problems through Kattis setup, independent solutions, generated data, cross-regional testing, advisory review, and release repair.

LEADERSHIP

ICPC Foundation

Director of Internships; Symposium Chair; Curriculum Co-Chair; Senior Editor

- Built the program to 136 completed internships with 9.6/10 feedback across 86 responses; co-lead a 50+ topic curriculum with 50,000+ downloads; launched the Journal of Competitive Learning's inaugural issue.

Columbia University

Adjunct Associate Professor of Computer Science | Jan 2025-present

- Associate in Computer Science (Adjunct), Jan 2022-Dec 2024; delivered 14 course offerings to 500+ students, built a 429+ member community, and coached two World Finals teams, including the 2024 North America silver medalists.

EDUCATION

Massachusetts Institute of Technology | Doctoral studies, Operations Research | 2013-2016 | Degree not completed; advisor: Asuman Ozdaglar

Stanford University | MS, Computer Science (AI), 2013 | Advisor: Fei-Fei Li

Stanford University | BS with Honors, Computer Science and Mathematics, 2011 | Advisor: Persi Diaconis

SELECTED PUBLICATIONS

637+ citations across computer vision, networks, programming systems, and competitive learning.

Accurate Data Race Prediction in the Linux Kernel through Sparse Fourier Learning | OOPSLA 2024

Competitive Rumor Spread in Social Networks | SIGMETRICS PER 2017

Object Bank: An Object-Level Image Representation for High-Level Visual Recognition | IJCV 2014

SELECTED HONORS

ICPC Mexico Trainer Recognition (2026) | Outstanding Problem Advisory (2025)

Outstanding Mentorship - Quatrefoil Medal (2024, 2025) | ICPC North America Excellence in Leadership Award (2023)