Aldrin Cabiong

Senior Software Engineer | AI/ML, Full-Stack & Distributed Systems

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PROFILE

Senior software engineer with 11+ years of experience building AI systems, full-stack applications, and distributed services. Designs production AI agents with LangGraph and LangChain, using supervisor routing, typed state, checkpoints, and human approvals, and connects them to business systems through MCP with scoped authorization and audit trails. Builds evidence-grounded RAG with hybrid search, reranking, and citations, backed by LangSmith evaluation suites and cost-aware model routing. Brings a strong distributed-systems and MLOps foundation, from microservices modernization and Kafka event pipelines at 99.95% availability to MLflow-tracked ML pipelines, with full-stack delivery in React, TypeScript, FastAPI, Node.js, and Django on AWS.

CORE SKILLS

AI AGENTS & ORCHESTRATION

LangGraph • LangChain • MCP (FastMCP) • Supervisor routing • Specialist delegation • Typed state & checkpoints • Human-in-the-loop approvals • Tool schema validation

LLM ENGINEERING & RAG

RAG • Hybrid search • Reranking • Access-aware retrieval • Grounded citations • Context engineering • Model routing • Inference cost optimization

EVALUATION & RELIABILITY

LangSmith • Evaluation datasets • Regression suites • Failure-injection testing • Bounded retries • Idempotency keys • Audit trails • p95 latency monitoring

ML & COMPUTER VISION

XGBoost • MLflow • YOLOv8 • Tesseract OCR • Versioned datasets • Batch inference • Model rollback

BACKEND & DISTRIBUTED SYSTEMS

Python • FastAPI • Kafka • Django • Node.js • Celery • Redis • Microservices • Versioned APIs • Event replay & DLQs

FRONTEND

React • TypeScript • JavaScript • Streaming UIs • AngularJS • API & regression testing • Mocha/Chai

CLOUD, DATA & DEVOPS

AWS • Terraform • Docker • GitHub Actions • Jenkins • Linux • PostgreSQL • MySQL • Autoscaling

PROFESSIONAL EXPERIENCE

Jan 2024 – Present
Metro Manila, Philippines
Full-time · Hybrid

Senior Software Engineer, AI Systems

Lightweight Solutions

- Architected LangGraph agents for client support workflows using supervisor routing and specialist delegation, with typed state, PostgreSQL checkpoints, bounded retries, and resumable human approvals.
- Introduced MCP integrations with FastMCP for business APIs, enforcing validated tool schemas, scoped authorization, audit trails, and idempotency keys to prevent duplicate actions during retries.
- Built evidence-grounded RAG agents with access-aware retrieval, hybrid search, reranking, and source citations, raising human-rated answer acceptance from 68% to 84% on a fixed evaluation dataset.
- Established LangSmith regression suites for task completion, tool selection, and grounding, alongside failure-injection tests; optimized context budgets and model routing to reduce inference costs by 28%.
- Delivered asynchronous agent execution and streaming React/FastAPI interfaces using Redis, Docker, AWS, and Terraform, monitoring p95 latency and tool failures.
- Mentored five engineers through architecture and code reviews.

Oct 2023 – Nov 2025
Bamban, Tarlac, Philippines
Freelance · Remote

Senior Software Engineer
Self-employed

- Built a LangGraph agent for engineering drawing review that automates 42 deterministic checks across DXF, vector PDF, and scanned drawings, using Tesseract OCR, YOLOv8, and RAG over technical specifications and ASME Y14.5.
- Integrated revision comparison, BOM/PO and STEP cross-checks, and Word/Excel document generation into the drawing review workflow.
- Engineered asynchronous AI processing with Celery, Redis, and Docker, implementing task routing, retries, and failure recovery for document ingestion, drawing analysis, and report generation.
- Developed LangChain/LangGraph agents for document retrieval and CRM workflows, including checkpointing, evaluation datasets, and documented handovers.
- Implemented MCP connectors with scoped permissions, approval gates, and idempotent actions, and tested failure recovery before handing workflows to client teams.
- Built SaaS features and API integrations, reviewed database performance and cloud configurations, and delivered focused improvements within agreed weekly hours and milestones.

Apr 2021 – Dec 2023
Philippines
Full-time · Remote

Senior Software Engineer
DXC Technology

- Modernized a client commerce platform into independently deployable services using versioned APIs, domain boundaries, and backward-compatible database migrations.
- Developed Kafka workflows for order and inventory processing with schema validation, dead-letter queues, and event-replay tooling, sustaining 99.95% availability for core services.
- Productionized an XGBoost classification pipeline with versioned datasets, MLflow experiment tracking, monitored batch inference, and rollback procedures.
- Reduced cloud infrastructure costs by 18% through autoscaling improvements and database query optimization.
- Standardized release checks and technical reviews across a six-person engineering team, improving consistency in deployment and incident response.

Jun 2018 – Mar 2021
Metro Manila, Philippines
Full-time · On-site

Full-Stack Software Engineer
Pointwest

- Developed merchant dashboards, checkout flows, and subscription-management features for retail clients using React and TypeScript, supported by Node.js and Django APIs.
- Implemented payment webhooks, reconciliation jobs, and inventory synchronization with idempotency keys, retry handling, and auditable transaction records.
- Optimized PostgreSQL reporting queries and introduced Redis caching, reducing median dashboard load time from 3.2 seconds to 1.4 seconds.
- Added API integration tests and frontend regression coverage, containerized application deployments, and introduced GitHub Actions.

Jun 2015 – May 2018
Clark, Pampanga, Philippines
Full-time · On-site

Software Engineer
TwistResources, Inc.

- Developed client web applications for scheduling, customer records, and operational reporting using Node.js APIs and AngularJS interfaces, including role-based access and REST integrations.
- Improved MySQL indexes and reporting queries, reducing the runtime of recurring reporting jobs by 40%.
- Introduced Mocha/Chai regression tests, Jenkins builds, and repeatable Linux deployments; maintained support documentation and resolved production defects.

EDUCATION

2011 – 2015
Tarlac City, Philippines

Bachelor of Science in Computer Science
Tarlac State University