

Michel Lacle

AI ENGINEERING LEADER

Miami, FL | michel@thinksmart.life | thinksmart.life | github.com/michellacle

PROFESSIONAL SUMMARY

Staff AI Infrastructure Engineer with 15+ years of experience designing distributed systems, cloud-native platforms, and AI infrastructure. Founding engineer on Progress Rail's Advanced Technology team, where I led its migration to AWS, architected its data analytics platform, and now lead its transition to an AI-first SDLC through agentic engineering workflows. Also operate an AI-native marketing agency powered by autonomous Hermes agents. Passionate about building sovereign AI infrastructure, multi-agent systems, and developer platforms that dramatically improve engineering productivity.

CORE EXPERTISE

Agentic AI Engineering: AI SDLC · Multi-Agent Systems · Autonomous Agent Workflows · Agent Orchestration · AI Coding Agents · Model Context Protocol (MCP) · RAG · AI Evaluation

AI Infrastructure: Local LLM Infrastructure · GPU Clusters · Ollama · llama.cpp · vLLM · Vector Databases · Self-Hosted AI

Cloud & Platform Engineering: AWS · Distributed Systems · Cloud-Native Architecture · Docker · Terraform · CI/CD · Event-Driven Architecture

Data & Backend Engineering: Python · FastAPI · PostgreSQL · OpenSearch · Elasticache · Amazon S3 · Redis · RabbitMQ

PROFESSIONAL EXPERIENCE

Progress Rail (Caterpillar) — Staff Software Engineer

2020 – Present

Joined as a founding engineer on the Advanced Technology organization shortly after it was acquired as a research startup, helping drive its prototype technology into production.

- Founding agentic engineer and architect on the team's AI SDLC initiative, leading the organization's transition to an AI-first SDLC through autonomous agent workflows and engineering standards.
- Founding cloud infrastructure engineer: migrated the entire codebase to AWS, established access controls and infrastructure-as-code with Terraform, and built the organization's CI/CD pipelines from the ground up.
- Scaled ML model training and validation onto cloud infrastructure, replacing a laptop-based workflow with an elastic, horizontally and vertically autoscaling pipeline.
- Architected and built the organization's data analytics platform in Python, ingesting real-time field telemetry from locomotives into a backend built on Amazon S3, OpenSearch (log analytics), and Elasticache — powering dashboarding and analytics across the data lake for internal teams and clients.
- Built the Python API layer serving real-time locomotive status and reporting data to the front-end application, including a video-replay capability enabling railroad managers to review and analyze locomotive trips.
- Leading a high-performing team on the energy optimization system for a hybrid locomotive — the department's flagship pilot for AI-assisted development, simultaneously shipping production software at high velocity while defining the AI-first SDLC best practices and patterns adopted across the wider organization.

ThinkSmart.Life — Founder & AI Infrastructure Architect

2020 – Present

- Operate a five-client AI-native marketing agency powered by autonomous Hermes agents.

- Design and operate private GPU infrastructure for self-hosted LLMs.
- Build autonomous agent systems, AI workflows, SEO automation, and research pipelines.
- Develop AI-first business automation platforms for small businesses.
- Publish in-depth technical research and writing on AI infrastructure, agentic systems, and local LLM deployment at thinksmart.life/research.

ADDITIONAL EXPERIENCE

- PlastiQ — Senior Software Architect (2015–2020)
- Glassdoor — Software Engineer in Test (2014–2015)

SELECTED AI PROJECTS

- Enterprise AI SDLC transformation using agentic workflows
- Hermes multi-agent orchestration platform
- Local AI infrastructure with GPU clusters and self-hosted LLMs
- AI-native marketing agency with autonomous SEO and reporting agents
- AI workflow engine and visual orchestration tooling
- YouTube AI content generation pipeline

EDUCATION

M.S. Computer Science — Florida Institute of Technology

B.S. Computer Engineering — Florida Institute of Technology

OPEN SOURCE & PORTFOLIO

GitHub: github.com/michellacle

Website: michellacle.com