MICHAEL HAYDEN

AI Engineer & Full-Stack Architect

Production LLM Systems (RAG, Agents, Tool Calling, Vector Search) • Python & Node.js • AWS
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PROFESSIONAL SUMMARY

AI engineer and full-stack architect with 18+ years building production software, and a lifelong direct salesperson. Ships production LLM systems: RAG over vector databases and OpenSearch with embeddings and semantic search, multi-agent orchestration, and LLM tool/function calling, integrated via LangChain, FastAPI, and the OpenAI API. Applies LLMOps discipline (prompt versioning, caching, observability, cost tracking) and handles multimodal and unstructured data (PDF, HTML, audio, image). Builds the systems around the AI in Python and Node.js on AWS, serverless (Lambda, API Gateway, Step Functions, EventBridge, SQS) with DynamoDB single-table design, plus REST APIs and React/TypeScript frontends. Strong relational SQL; end-to-end ownership from architecture through deployment; mentors engineers and communicates equally well with developers and executives.

CORE COMPETENCIES

AI / LLM Systems: RAG, vector databases & OpenSearch, embeddings & semantic search, multi-agent orchestration, LLM tool/function calling, prompt engineering, LangChain, OpenAI API

LLMOps & Evaluation: Prompt versioning, caching, observability, cost tracking, guardrails & governance; multimodal & unstructured data (PDF, HTML, audio, image)

Languages & Frameworks: Python (Django, DRF, FastAPI), Node.js, TypeScript & JavaScript (ES6+), Java; HTML5/CSS3

Cloud, AWS & DevOps: Lambda, API Gateway, DynamoDB (single-table design), Step Functions, EventBridge, SQS, S3; Docker & Docker Compose, Nginx, CI/CD (GitHub Actions), Linux; TLS, private networking, custom domains

Backend, APIs & Frontend: REST & contract-driven API design, microservices, background workers & async/queue-driven processing (Redis); React, Next.js, micro frontends

Databases: PostgreSQL/PostGIS, DynamoDB, Redis; SQL & relational design, querying & optimization (ports to MS SQL/T-SQL)

Go-to-Market: Technical discovery, solution architecture, POCs & demos, migration playbooks, objection handling, executive and developer communication

SELECTED AI PLATFORMS

Designed and delivered (live case studies at michaelhayden.net):

Hayfish AI, extensible AI platform: multi-agent orchestration, LLM tool/function calling, and retrieval, with API services and deployment governance. *Stack: Python, Django, LangChain, OpenAI API, Docker, Google Cloud*

KYC Agent, AI-assisted know-your-customer compliance: rules-driven and LLM verification with retrieval-assisted checks, document/unstructured-data processing, and full auditability. *Stack: Django REST Framework, OpenAI API, PostgreSQL, Redis, Docker, AWS*

FOUNDER & DIRECT SALES

CEC Greenhouse (cecgreenhouse.com), Colorado **1996 – Present**
Founder & Direct Sales

- Three decades of direct, person-to-person selling. Founded a vertically integrated freeze-dried foods brand (grow, juice, freeze-dry) in 2018; own product, pricing, unit economics, and in-person closing, sustaining 250 to 700% product margins while engineering full-time.

PROFESSIONAL EXPERIENCE

Scepter, Corp., Remote **Dec 2023 – Present**
AI Engineer & Full-Stack Architect

- Ship production LLM systems: RAG over vector databases and OpenSearch with embeddings and semantic search, multi-agent orchestration, and LLM tool/function calling, integrated via LangChain, FastAPI, and the OpenAI API.
- Apply LLMOps practices, prompt versioning, caching, observability, and cost tracking, with guardrails and governance; handle multimodal and unstructured data (PDFs, HTML, audio, images).
- Build the systems around the AI in Python and Node.js on AWS, serverless (Lambda, API Gateway, Step Functions, EventBridge, SQS) with DynamoDB single-table design, plus REST APIs and React/TypeScript frontends.
- Take features end to end from architecture through deployment; support release processes and CloudWatch observability; troubleshoot and improve the reliability of production systems serving real users.
- Lead design, code, and architecture reviews and mentor engineers; work AI-first and spec-driven, directing AI coding agents to production-ready output and validating for correctness and security.

Swell, Santa Monica, CA **Nov 2022 – Dec 2023**
Senior Full-Stack Engineer

- Built data-intensive React/Next.js interfaces for solar-energy modeling and financial estimation, including geospatial visualizations, with supporting API integration.

SAS Institute, Calgary, Canada **Jan 2022 – Nov 2022**
Senior Full-Stack Engineer

- Built full-stack features for regulated energy-trading platforms, React/TypeScript front end and Java/Spring backend services, aligning architecture with compliance, security, and performance requirements.

Passport Labs, Inc., Charlotte, NC **Dec 2020 – Jan 2022**
Lead / Senior Engineer & Architect

- Led architecture through modernization of a monolithic application into microservice-based systems; defined shared patterns, mentored engineers, and drove code-review standards.

Cleo Labs, Inc., San Francisco, CA **Nov 2018 – Dec 2020**
Managerial Lead / Senior Engineer

- Led web and mobile (React, React Native) development and established engineering standards and development best practices.

Apple, Inc., Boulder, CO **Jan 2015 – Oct 2018**
Senior Engineer / Architect

- Architected global frontend platforms for Beats retail performance analytics, deployed across major retail partners worldwide.

EDUCATION

California State University, Northridge, Computer Science / Music Performance (Clarinet)

AWARDS

Time Warner Cable COED Innovation Award (2014)