

Alan Hegewisch

Senior Platform & Backend Engineer — AI/Agentic Systems

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SUMMARY

Senior Platform & Backend Engineer with 10+ years designing, scaling, and stabilizing high-volume distributed systems in highly regulated industries (FinTech, Digital Health, Cybersecurity). Expert in constructing deterministic guardrails around non-deterministic AI agent architectures, specializing in tool execution, multi-tenant state isolation, and evolvable API contracts. Deep PropTech / real estate software domain expertise, combining pragmatic system architecture with a relentless focus on reliability at scale.

TECHNICAL SKILLS

AI & Agentic Systems: Multi-Agent Orchestration, Tool Calling, Agent State/Memory Management, Prompt Engineering, Evaluation Frameworks (Mastra, LangChain, n8n, Langfuse)

AI Coding Tools: Claude Code, Cursor

Languages: TypeScript, Node.js, Python, Java, Go, SQL, JavaScript

Infrastructure & Distributed Systems: AWS, Spring, Kafka, Kubernetes, Docker, Microservices Architecture, Event-Driven Architectures, Queue Management, Circuit Breakers, GraphQL, React, Node.js

Databases: Postgres, MySQL, Cassandra, DynamoDB, OpenSearch, Redis, BigQuery

DevOps & Observability: GitHub Actions, Jenkins, CircleCI, Git, Jira, Kibana, Prometheus/Grafana (SLIs/SLOs)

Compliance & Security: GDPR, HIPAA, SOC 2, DLP

PROFESSIONAL EXPERIENCE

Fractional CTO & Consultant - Self-Employed (CDMX, Mexico)

May 2025 - Present

Operated as a fractional CTO and systems architect for high-growth PropTech, vertical SaaS, and urban development ventures, specializing in "0-to-1" execution of production-grade AI agents and robust data pipelines.

- **Synapse** (Workflow Automation): Formulated core system architecture and tool-calling interfaces for multi-agent workflows executing complex domain financial logic.
- **Synapse** (Workflow Automation): Instrumented multi-agent workflows with Langfuse for observability and evals, validating AI-generated outputs for hallucinations, incorrect logic, and security gaps before they reached production.
- **Reurbano** (Urban Development & Community Software): Designed data flow patterns and scoped AI orchestration tools to automate asset management and resident communication interfaces across community real estate ecosystems.
- **Sidekick Flow** (Real Estate Automation): Engineered deep CRM integrations and custom webhooks with Follow Up Boss (FUB), automating a "Deal Assurance" pipeline that systematically checked data integrity, compliance documents, and property inspections during critical transaction windows.

Senior Software Engineer - Keep Aware (Austin, TX)

October 2023 - May 2025

- Built an AI-powered data summarization tool using LLMs that automated research tasks for the internal analysis team, saving them 80% of their time.
- Architected and scaled high-volume data systems processing 100M+ daily events for 40,000+ users, supporting a 3x expansion in the client base and company revenue.
- Developed a flexible integration framework that cut new-provider onboarding from multiple weeks to 15 minutes, enabling rapid integration with enterprise platforms like Azure and Okta.

- Automated CI/CD pipelines using GitHub Actions, significantly reducing build errors and manual effort for production releases.

Senior Software Engineer - Babylon Health (Austin, TX)

November 2021 - August 2023

- Engineered a large-scale video call quality metrics system in Java with rate limiting and a Kafka + BigQuery ETL pipeline, owning the video consultation and appointment metrics microservices and providing actionable insights that resulted in tens of thousands of clinician hours saved.
- Developed a key integration with an external provider projected to reduce monthly operating expenditures by \$500,000 USD.
- Implemented strategic caching in the full-stack clinical portal (React/React Native), reducing outbound REST API calls by 66%.

Lead Full-Stack Engineer / Engineering Manager - Acuant, formerly IdentityMind Global (CDMX)

April 2018 - October 2021

- Joined IdentityMind Global as the first engineering hire on the core team and grew into team lead, then engineering manager, pioneering the expansion of the core Mexico team as the company scaled to 1,000+ customers and a \$736M USD acquisition by GBG.
- Led a distributed team of 6 engineers, balancing hands-on development with strategic management; held regular 1-on-1s and mentored team members into senior developer, manager, and lead roles.
- Developed key SaaS features for anti-money laundering and financial compliance (SSO, Risk Matrix), enabling entry into new market segments.

Previous Engineering Roles

- **Software Engineer, Nxtlab** (2017 - 2018): Built SaaS solutions using Java, Spring, and SQL; guided the team as a Scrum Master.
- **Junior Web Developer, CS Group** (2015 - 2017): Built web applications for national clients (e.g., Subway Mexico) using HTML, CSS, JavaScript, and PHP.

EDUCATION

B.S. in Computer Science - Tecnológico de Monterrey (2012 - 2017)

LANGUAGES

Spanish (Native) | English (Native)