

John Baker

AI Engineer · Agentic & Multi-Agent Systems

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UK / Remote · Outside IR35 · Available now

PROFILE

AI engineer and technical founder who designs, builds and operates production multi-agent systems end-to-end. Specialist in agentic architectures - autonomous coding-agent orchestration, Model Context Protocol (MCP) tool servers, RAG, multi-provider model routing and LLM token-cost / evaluation engineering. I don't just build these systems, I build with them: I run fleets of headless coding agents to ship and maintain a portfolio of in-production platforms at a scale that usually takes a team - with governance, evaluation and cost controls throughout. Polyglot across PHP, Python, Go, Rust, TypeScript, Swift and Dart, and equally at home in backend, web, desktop and mobile. Comfortable operating single-handed on my own platforms and embedding in an established team - two decades contracting inside BT came before this.

CORE SKILLS

Languages	TypeScript / JavaScript, PHP, Python, Go, Rust, Swift, Dart
AI / ML	Multi-agent orchestration (headless Claude Code, Google ADK), MCP tool servers, RAG (Qdrant), multi-provider LLM routing via LiteLLM (Anthropic / OpenAI / Gemini), prompt-cache & token-cost engineering, agentic tool-use, vision / OCR, anomaly detection
Backend	Laravel, CodeIgniter, FastAPI, REST API design, PostgreSQL / TimescaleDB, MySQL, Redis, WebSockets, queues
Front-end / Desktop	React, TanStack Query/Table, Tailwind, shadcn / Radix, Tauri, Astro, Vite
Mobile	Native iOS (SwiftUI / Swift), Flutter, React Native / Expo
Infra / DevOps	Docker, GitHub Actions CI/CD, Netlify, Cloudflare Workers, Semgrep, Sentry / GlitchTip, Easypanel
Engineering	TDD (PHPUnit, Pest, Vitest, Playwright, Cypress, XCTest, pytest), static analysis, multi-tenant & secure-by-design architecture, WebAuthn / passkeys

SELECTED PROJECTS

Three independently built, in-production systems. Stakker is the engine room - the orchestration layer I develop and maintain the others with.

Stakker: Multi-Agent Task-Orchestration Platform 2026

- Designed and solo-built a production platform that runs fleets of autonomous, headless Claude Code agents against a shared backlog - six repositories spanning a Laravel / PostgreSQL API (~158 endpoints), a TypeScript / Bun CLI, a React + Tauri desktop & web app, a native SwiftUI iOS app, and a Bash / tmux / launchd agent supervisor. It's the orchestration layer I now build and maintain the rest of my estate through.
- Built the autonomous agent runtime: fresh per-cycle agent processes with timeouts and live control, and per-task model / provider resolution across five inference runtimes (Claude, Codex, Ollama, ZAI, MiniMax).
- Engineered LLM token-economics - prompt-cache-aware billing and usage aggregation by project / agent / provider — plus automated eval / retro feedback loops and agent-health circuit-breakers to keep autonomous agents safe and on-scope.
- 300+ automated tests across the stack (PHPUnit, bun:test, Vitest, XCTest); GitHub Actions CI with Semgrep on every repo; Dockerised deployment to live services.

Amplifi-Qx: End-to-End B2B SaaS Platform (Signal Solutions) 2021 – present

- Architected a 21-project, 8-language platform running a mobile-signal-booster business end-to-end (CRM, proposals, cellular site surveys, field installation, hardware monitoring, finance, HR, partner & customer portals), with a CodeIgniter API (600+ routes) serving web, mobile, desktop and partner channels.

- Built a 30-agent AI system on Google ADK with multi-provider routing (Gemini, Claude, GPT-5 via LiteLLM), Qdrant-backed RAG memory, and a custom MCP server exposing 100+ access-controlled tools with row-level ACLs and rate limiting.
- Engineered a resilient hardware-integration microservice (FastAPI + APScheduler) with circuit-breaker, rate-limiting and idempotency over a TimescaleDB time-series store; plus a statistical anomaly-detection service (MAD / z-score / seasonal) flagging finance and signal outliers.
- Integrated 30+ external services (Xero, Google Workspace, TP-Link Omada, WhatsApp Business, n8n...); 140+ GitHub Actions workflows; secure-by-design throughout (httpOnly sessions, tenant-scoped tokens, constant-time key comparison, Semgrep + secret-scanning in CI).

Omnixi: Unified Telecoms Management Platform

2026

- Designed and built a multi-tenant B2B telecoms SaaS spanning 15 repositories - a Laravel API (840 routes, 114 models, 283 services), two React / Tauri desktop apps and two Expo mobile apps.
- Architected an AI automation layer over a LiteLLM gateway delivering 20 task-specific LLM features (bill / usage anomaly detection, CDR tariff optimisation, spend forecasting, document parsing, deal scoring, support chat) with guardrails, per-call token logging, daily caps and model fallback.
- Implemented agentic tool-use letting the model trigger real platform actions (provisioning, diagnostics, ticketing); integrated 12+ systems including Stripe, GoCardless, Xero and Companies House, with passkey / WebAuthn authentication.

PROFESSIONAL EXPERIENCE

Signal Solutions Ltd: Founder & Technical Director

2021 – present

- Co-founded and built the company's entire technical estate — the Amplifi-Qx platform (above), plus brand, marketing site, backend, APIs, mobile apps and business automations — serving enterprise clients across Europe in multiple sectors including hospitality, retail and corporate.
- Now in a strategic, non-operational capacity (remaining a company director), freeing capacity for external contract work.

Boosh 365: Director & Technical Lead

2020 – 2021

- One of two directors of a B2B telecoms reseller (broadband, mobile, VoIP and IT services); led the rebuild of the company's technical platforms and internal processes.
- That rebuild underpinned a successful trade sale; the business was acquired by a larger telecoms provider for £1m, and the software I had built was later purchased by the buyer for a six-figure sum.

BT: Lead Software Engineer (Contractor)

2001 – 2020

- 19 years developing and maintaining a business-critical global system recording the details of BT's worldwide IT assets, applications and infrastructure - long-lived, large-scale enterprise software demanding reliability, careful data modelling and operational stability.

EDUCATION

GCSEs. Predominantly self-taught engineer; capability evidenced by the production portfolio above.