Kevin Hughes

Senior full-stack engineer, solutions architect and DevOps practitioner

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PROFILE

Hands-on full-stack engineer, solutions architect and DevOps practitioner with 13+ years in technology, currently Head of Development for a platform handling 5M+ hits a day. I design and build microservices, real-time systems, payments platforms and production AI end to end: back-end APIs and messaging, React and Next.js front ends, Azure DevOps CI/CD pipelines, and Docker and Helm releases to Kubernetes on AKS and bare metal. Equally useful as a developer, an architect, or to rescue and fix a struggling project.

AVAILABILITY

One month's notice. Remote UK-wide, or hybrid or on-site in Glasgow. Inside or outside IR35 (can operate through a limited company).

TECHNICAL SKILLS

Core: C#, TypeScript, .NET (up to .NET 10), ASP.NET Core Web API, Entity Framework / EF Core, React, Next.js, Azure (incl. AKS and PaaS), Kubernetes (AKS and bare metal), Docker, SQL Server, Redis, MassTransit, SignalR, Claude Code, Agentic workflows

Backend: gRPC, Hangfire, MediatR, Mediator (source generator), FluentValidation, FluentResults, Liquid templating, ASP.NET Web API, OData, ASP.NET MVC, Classic ASP (legacy migration)
Frontend: Astro, TanStack Query (React Query), Zustand, Redux, Nx monorepos, Angular, Blazor
Architecture: Microservices, Event-driven architecture, Domain-driven design (DDD), Distributed systems, CQRS, Clean architecture, SOLID
Cloud, platform and DevOps: Azure Container Registry, Cloudflare, Helm, Azure DevOps CI/CD (YAML and classic pipelines), Build and release pipelines, AWS (S3, SQS, SES), CloudAMQP
Data, search and caching: SQL, Dapper, FusionCache, DbUp, Typesense, MongoDB, Data migration, BI and MI reporting, SSIS, SSRS, Tableau
Messaging and real-time: RabbitMQ, Azure Service Bus, LavinMQ, Web Push notifications
AI: LLM evaluation and guardrails, LLM-based moderation, MCP integration, Prompt engineering, Hosted LLM APIs (multi-model routing)
Testing: Playwright end-to-end testing, xUnit, Integration testing, Testcontainers, Test harnesses and provider simulators, Moq, Bogus, NUnit, MSTest
Observability: Datadog (APM and monitoring), OpenTelemetry, KPI and event tracking with anomaly alerts, Alert routing to Jira, Teams and Slack, Sentry, Serilog, Prometheus
Identity, auth and security: OAuth2 / OpenID Connect, Microsoft Entra ID (formerly Azure AD, MSAL), Duende IdentityServer, JWT, FIDO2 / passkeys, Secure design, ethical hacking and penetration testing
Video and media: Live and adaptive video streaming, HLS streaming, hls.js, Real-time video SDKs (WebRTC), tus resumable uploads (Uppy), FFmpeg, nginx VOD, imgproxy, ImageSharp / SkiaSharp, Chat SDKs
Integrations: Payment service providers, OpenAPI / Swagger, Email and SMS providers, Zendesk, Microsoft Graph, Google APIs, Identity and age verification services, Ortto (marketing automation), Cloud storage, Social APIs
Ways of working: Agile, Scrum, Kanban

EXPERIENCE

Global consumer platform Sep 2019 – Present

High-traffic consumer marketplace and live-streaming platform. Glasgow.
Head of Development (2024 – Present) · Solutions Architect (2020 – 2024) · Senior Developer (Sep 2019 – 2020)

Lead software development across the platform, which handles 5M+ hits a day, and run the Glasgow office.

- **Turned around the live video streaming platform.** .NET rewrite with SignalR real-time messaging, shared session state in Redis so any server can pick up any session, and zero-downtime deploys mid-stream; browser-to-browser media via a real-time video SDK.
- **AI helpdesk assistant.** Designed the architecture and directed the build: .NET 10 services with background workers, an LLM triage and drafting pipeline with strict JSON output, deterministic retrieval (so ticket text cannot steer the model into tool calls), including knowledge sources via MCP, code-enforced guardrails, a Next.js review app, and an evaluation harness that replays past tickets with a calibrated LLM judge. A thorough automated test suite including integration tests against real SQL Server, Helm and Azure DevOps deployment, Datadog monitoring.
- **Greenfield multi-provider payments platform with automatic failover.** A dozen providers (15+ flows) behind one routing API: ordered rules by amount, currency and country, weighted traffic splits, automatic fall-through when a provider rejects a payment, and a journal of every attempt. Also started the payouts service. Every purchase on the platform goes through it.

- **Marketplace store and end-to-end test suite.** Our own marketplace built end to end, React front end and .NET backend (verified third-party suppliers, credits checkout), plus 92 Playwright tests across 79 journeys, tagged to requirement IDs, with isolated test data, run after every dev deploy and failing the dev release stage on any broken journey.
- **Video-on-demand platform with secure streaming.** .NET movie service: resumable tus uploads (Uppy), Hangfire background jobs, a managed encoding service tracked by webhooks and a reconciler, a rendition ladder to 4K, on-the-fly HLS to hls.js, encrypted streaming with per-request entitlement, and S3-compatible storage; MassTransit and gRPC to the rest of the platform.
- **CI/CD and releases across the platform's services.** End-to-end Azure DevOps pipelines (YAML and classic), Docker images in Azure Container Registry, Helm releases to AKS and to bare-metal Kubernetes clusters run by the infrastructure team, and Datadog APM and monitoring on every service.
- **Business-KPI service, monitoring and alerting.** Each metric is a tiny traced endpoint (Datadog APM, no metrics database), a shared package so every service uses the same KPI names, and browser beacons for legacy pages; Datadog monitors and anomaly alerts with webhooks into Jira, Teams and Slack.
- **Real-time AI moderation platform.** Checks messages, chat, posts and images before delivery, configurable per area (auto-publish, auto-reject or human review), with audited batch moderation and a feedback loop, on asynchronous Hangfire workers and webhooks.
- **Greenfield multi-provider notifications service.** Provider-agnostic email and SMS service (architected for social posting), Liquid templating, and a template preview tool in the moderation suite.

Tech: C#, .NET, SQL Server, Redis, Event-driven architecture, SignalR, Hangfire, MassTransit, RabbitMQ, TypeScript, Payment service providers, LLM-based moderation, Agentic workflows, Playwright end-to-end testing, React, Next.js, Nx monorepos, Kubernetes, Azure, Cloudflare, Docker, Microservices, gRPC, OpenAPI / Swagger

Senior .NET Developer (Technical Lead), City Facilities Management Ltd Jun 2016 – Sep 2019
Facilities-management products for major retailers in the UK and US. Glasgow.

Technical lead and Scrum Master for an agile delivery squad.

- **Data migrations and the move to Azure PaaS.** Led the migrations for four product releases, consolidating databases to make the move possible.
- **Represented the company on site for the Walmart release.** Selected to spend three months in Florida, overseeing the release and transition.
- **Six customer releases across the UK and US.** For ASDA, Marks & Spencer, Southeastern Grocers, Ahold, Walmart and 7-Eleven.

Tech: C#, .NET, ASP.NET Web API, OData, Entity Framework / EF Core, MediatR, Azure Service Bus, CQRS, SQL Server, SSIS, Azure, Data migration, Scrum

MI Analyst, Barclays Wealth and Investment Management Aug 2015 – Jun 2016
Wealth and investment management division of Barclays. Glasgow.

Produced global credit risk reporting for senior management and the Financial Conduct Authority, and contributed to the bank's BCBS 239 risk-reporting programme.

Head of Business Intelligence, Creditfix Limited Jan 2014 – Jul 2015
Debt solutions provider. Glasgow.

Managed a team of data analysts and developers responsible for the group's data and reporting.

- **Ran the group's reporting platform.** Ran three SSRS reporting servers, including one on Azure, and built SSIS ETL pipelines.
- **Client portal prototype and credit-report parser.** Built a prototype client portal in ASP.NET MVC and an automated credit-report parser for data integration.

Tech: SQL Server, SSRS, SSIS, Azure, ASP.NET MVC

Earlier career. Eight years of people and operations management, much of it alongside my degrees, before moving into technology. Systems Administrator, Expert Insolvency Claims (2013–2014) · Deputy Manager, William Hill (2011–2013) · Floor Manager, McDonald's (2004–2010).

EDUCATION

MSc Ethical Hacking and Computer Security, Abertay University (2010–2012). Grade: 85%.
BSc Computer Games Technology, Abertay University (2004–2009).