Martin Hughes



Lead Software Engineer

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Profile

Lead software engineer with over twenty years in web development, cloud migrations and team leadership, now mainly using TypeScript and AWS. In my own time, I build Sproggo for my partner Freya, including AI day planning, search and listing tools on AWS Bedrock with structured outputs and queued processing.

Key skills

AI and agents	AWS Bedrock, LLM APIs and tool calling, Structured outputs, RAG using application data, Claude Code, Codex, MCP, Agent skills, Multi-agent orchestration
Languages and frameworks	TypeScript, JavaScript, Node.js, React, Next.js, Express, PHP, Laravel, Symfony, Vue.js
AWS and infrastructure	Lambda, API Gateway, AWS CDK, SST, EventBridge, SQS, ECS and Fargate, EC2, S3, SES, CloudFront, Route 53, Terraform, Ansible, Docker, Cloudflare, Vercel
Data and messaging	Event-driven architecture, PostgreSQL, Neon, Drizzle, MySQL, DynamoDB, MongoDB, ElastiCache, RabbitMQ, Kong
Testing and quality	Jest, Vitest, Playwright, Mocha and Chai, PHPUnit, Pest, Sentry, Grafana and StatsD
Ways of working	GitHub Actions, Jenkins, Git, REST and OpenAPI, Stripe Connect, Tailwind CSS, Jira, Notion, Agile delivery, Mentoring

Experience

Sportsshoes.com

Shipley and remote

Senior Developer

Jul 2024 - Present

UK online sports retailer. I work across warehouse fulfilment, order management and customer data.

- Cut customer data platform processing from days to hours.
- Moved the on-premises order management system to AWS so the team could manage deployments and see what was happening in the logs.
- Fixed security and performance problems in older internal systems.
- Traced slow order completion to the way picking tasks were consolidated, and reworked the flow.
- Built event-driven warehouse fulfilment services in TypeScript on AWS Lambda, with low latency and high availability.
- Brought in test-driven development with Jest, covering new features and legacy code as it was modernised.
- Introduced AWS CDK so services deploy the same way every time.
- Mentored junior and mid-level developers in AWS, TypeScript and CDK.

Stack: TypeScript, Node.js, AWS CDK, Lambda, API Gateway, S3, SES, MySQL, PHP

easyodds.com

Leeds and remote

Technical Director

May 2021 - Apr 2024

Head of Technology

Jan 2020 - May 2021

Sports betting odds comparison. I led the technology team and stayed hands-on, roughly 70% building and 30% leading.

- Integrated feeds from several data providers, processing millions of data points a day.
- Rebuilt the platform as event-driven microservices. API responses became faster and the platform more reliable.
- Moved services from VPS hosting to containers on AWS ECS. This reduced costs, improved uptime and let us add capacity as needed.
- Rebuilt the frontend in React and Next.js with TypeScript for faster page loads.
- Built Lambda functions triggered by S3 uploads to distribute data by email through SES.
- Agreed requirements with the people commissioning the work and kept them updated throughout each project.

Stack: TypeScript, React, Next.js, Vue.js, Node.js, PHP 8, Laravel, Docker, Ansible, Grafana, AWS ECS, RDS, ElastiCache, SQS, CloudFront

DealTrak
Leeds

Lead Developer Jun 2019 - Dec 2019

Senior Developer Aug 2017 - Jun 2019

Motor finance software used by car dealerships across the UK.

- Planned how to split the monolith into smaller services and use events to communicate between them.
- Mentored developers, reviewed code and ran training for the team.
- Reported team metrics and project progress to company directors.
- Rolled out Ansible across the team for UAT and production deployments and everyday tasks.
- Led sprint teams and wrote the technical specifications for new features.
- Replaced an insecure web service authentication scheme with an encrypted system that was easier to manage.

Stack: PHP 7, Symfony, jQuery, REST and XML APIs, Docker, Ansible, AWS ECS, EC2, RDS

aql
Leeds

Senior PHP Developer Jan 2015 - Aug 2017

Telecoms and data centre company.

- Built and launched the free public Wi-Fi captive portal used by millions of people across Leeds city centre and Leeds Bradford Airport.
- Built a multi-threaded SMPP client and server that sent over 600,000 SMS messages a day for brands including parkrun.

Stack: PHP, SMPP, MySQL, Linux

9xb
Harrogate

Senior Systems Developer Sep 2011 - Dec 2014

Senior Developer Sep 2005 - Sep 2011

Digital agency. Where I learned the trade and later ran the backend framework.

- Designed and built the e-commerce framework behind sites like Bathstore, with inventory management, a flexible entity-attribute-value product model and payment gateway integration.
- Built and maintained the backend framework the agency used to start every project.
- Introduced the team to object-oriented programming and MVC, and mentored junior developers.
- Met clients to gather requirements and demo work to technical and non-technical audiences.

Stack: PHP, MySQL, JavaScript, MVC

AI and agentic development

- Build AI features with application data, LLM APIs and schema-based tool calling. Use rules and cached AI results for date parsing.
- Use Claude Code and Codex with repo instructions, skills and MCP tools, restricted permissions and automated tests.
- Divide work between coding and reviewer agents, with a written plan and a final review of the changes.

Side projects

Sproggo sproggo.co.uk
Jan 2026 - Present

Sole developer, evenings and weekends

Built my partner Freya's family activities platform with AI planning, search and listing tools on Bedrock.

- Turborepo monorepo: directory, provider dashboard, admin, Payload CMS and serverless API.
- Lambda and API Gateway with EventBridge and SQS, deployed with SST. Neon Postgres, Drizzle and developer branches.
- Bedrock structured tool outputs; SQS jobs with retries and bounded concurrency; Stripe Connect payments.

Showtime! (trivia.madeathing.dev). Live multiplayer trivia with question packs, bots and solo practice.

Vowel Movement (vowelmovement.fun). Multiplayer letters and numbers, daily challenges and paid team tournaments.

Screenpose (screenpose.app). Browser-based 3D device mockup generator with high-resolution image exports.

Bit Palace (bitpalace.madeathing.dev). Pixel-art multiplayer casino with fictional chips and computer opponents.

Last Call (lastcall.madeathing.dev). Six multiplayer bluffing, dice and card games around a 3D table.

Education

BTEC National Diploma in Software Development, Shipley College 2003-2005

Additional information

PC builds for friends and family, BIOS setup and stability tests. Full, clean UK driving licence.