

Contact

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Summary

- Hands-on Tech Lead and senior software engineer with over 30 years of experience across backend development, cloud platforms, and large-scale legacy systems.
- Specialising in modernising long-lived systems, migrating embedded legacy logic into well-tested high-performance architectures.
- An advocate for comprehensive testing, with deep expertise in establishing characterisation tests for modernisation work, and building testing frameworks that help test untestable legacy code.
- Exploring Specification Driven Development (SDD) workflows that use agentic orchestration (LLM agents) to translate business requirements into documented, tested code.
- Experienced with GCP, Terraform, and PostgreSQL, with a track record of decoupling monolithic systems into modular services.
- Remote, UK. Open to fully remote roles with flexible working hours, where technical versatility and a disciplined approach to engineering are valued.

Employment

Situation Publishing

December 2022 to present (Tech Lead)

May 2017 to present (Senior Developer)

Lead engineer for the backend systems powering The Register and the company's lead-generation platform, covering cloud architecture, legacy modernisation, and infrastructure automation.

- Cut call centre contact searches to near-instant by rewriting the lead-generation matching logic for a PostgreSQL-backed CRM, using denormalised, heavily indexed tables (B-tree, GIN trigram, tsvector), Redis per-campaign queues, and Kafka event logs. All backed by a comprehensive suite of unit and integration tests executed against real, ephemeral databases.
- Progressively decoupling legacy Perl logic by building modern API endpoints, automation utilities, and event-driven Kafka and Debezium pipelines. All with thorough, multi-layered testing strategies.
- Developed production services in Rust to replace components of monolithic systems, including a database replication monitor, a short-URL redirector, and a Kafka consumer for lead-generation events. All deployed with Terraform.
- Designing and deploying GCP services (Cloud Run, Cloud Build, IAM, VPC access, IAP, HTTPS load balancers, Private Service Connect) via modular Terraform with secure defaults and automated deployments.
- Designing and optimising PostgreSQL/MySQL schemas and queries, and diagnosing system-wide production issues from databases to cloud services.
- Currently exploring agentic coding by designing a workflow where specialised LLM agents produce IEEE 830 specifications, refine them into EARS syntax and Gherkin scenarios, then validate generated code against the resulting BDD/TDD suite and bespoke LLM-oriented coding standards.

SpareRoom.co.uk

August 2011 to May 2017 (Technical Lead)

Technical Lead for one of the UK's busiest flat-sharing websites, driving improvements to code quality, performance, scalability, and development processes.

Key achievements:

- Led the migration from managed servers to colocation, successfully switching live traffic to the new infrastructure with zero downtime and zero issues. Refactored the codebase to remove years of hard-coded, hardware-specific configurations. Built a highly available, HAProxy-fronted MySQL read-write and read-only replica architecture to support the move. Used Puppet for fully reproducible server builds.
- Introduced Perl coding standards, code reviews, unit testing, and structured refactoring practices.
- Migrated version control from Subversion to Git.
- Improved scalability with memcached and Gearman; upgraded legacy Perl and MySQL systems.
- Built standardised development/testing environments using VirtualBox.
- Moved advert photo storage to AWS S3 behind EC2/ELB.
- Implemented HAProxy for front-end and database load balancing.
- Automated deployments using Perl, Rex, and Pinto.
- Led the migration of core search from MySQL to Sphinx Search, delivering major performance gains.

Self Employment

August 2005 to August 2011

Freelance web development and IT support for small businesses, including building database-driven sites (Linux, Apache/nginx, MySQL, PHP, Perl), creating custom CMS platforms, and delivering bespoke data-processing utilities.

Cheshire Building Society

July 2001 to April 2003 (Technical Support Programmer)

April 2003 to August 2005 (Infrastructure & Security Analyst)

Third-level support for critical systems, followed by infrastructure and security work covering disaster recovery testing and firewall maintenance.

Building Design Partnership

July 1996 to July 2001 (Third-Level Technical Support)

Expert Systems Design

July 1995 to July 1996 (Developer & On-Site Support)

Atkins Odlin & Partners

April 1992 to July 1995 (Computer Administrator & AutoCAD Technician)

Technical Skills

- Languages: Perl (primary), JavaScript, SQL (PostgreSQL & MySQL), Rust (novice), Bash
- Cloud: Google Cloud Platform (Cloud Run, Cloud Build, IAM, IAP, VPC, PSC, AlloyDB)
- Infrastructure: Terraform, Ansible, CI/CD pipelines, automated deployments
- Data & Streaming: PostgreSQL, MySQL, Apache Kafka, Debezium
- Systems & Ops: Linux, Git, systemd
- Web: HTML/CSS/JavaScript, Apache HTTP Server