Simon Hirst

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# Summary

Software engineer (~5 years) building web apps and services. I work with **JavaScript/TypeScript** and React on the front end and **.NET/Go** on the back, design **RESTful** and **GraphQL** APIs, and keep things reliable in the cloud (**Amazon Web Services (AWS)/Azure**). I focus on shipping useful features, writing clear, tested code, and keeping teams unblocked.

## Freelance Software Engineer - *Remote*

**Aug 2024 – Present**

- Shipped full-stack features with **React + JavaScript/TypeScript (Next.js)** and **Node.js** services; owned design → deploy in agile sprints.

- Designed **RESTful** and **GraphQL** APIs with validation, auth and **secure coding practices**; integrated third-party services and internal APIs.

- Modelled and tuned **PostgreSQL** with targeted indexing; added **Redis** caching to cut p95 latencies under load.

- Implemented **CI/CD** in **GitHub Actions** (unit tests, **Playwright/Jest**, SAST/Dependabot) and automated deployments to **Amazon Web Services (AWS).**

- Containerised services with **Docker** and prepared workloads for **Kubernetes/OpenShift**; added observability via **Prometheus/Grafana**.

- Prioritised performance and reliability with **k6** load tests, small PRs, and clear runbooks; worked closely with product/design.

## IBM - *Software Engineer - Remote / Hursley*

**Jul 2021 – Jul 2024**

- Helped deliver a **containerised edition of IBM MQ**: packaged images, tuned Kubernetes/OpenShift manifests (StatefulSets, readiness/liveness probes, resource limits) and documented supported topologies (HA, persistent volumes, network policies).

- Built **Go utilities** and scripts that standardised customer installs and upgrades on OpenShift; reduced time-to-first-message for new clusters and cut common misconfigurations.

- Worked with customers on **production rollouts**: TLS configuration, storage classes, scaling/HA, and disaster-recovery rehearsals; captured fixes and patterns in runbooks.

- Added **operational telemetry** (Prometheus metrics and Grafana dashboards) for queue depth, TLS/session health, CPU/memory, and storage IOPS; improved signal for SREs and support.

- Contributed to **secure defaults** (RBAC, secrets handling, image provenance) and guided teams through internal audit checks and change reviews.

- Improved **release hygiene** with CI workflows (build, unit/integration tests, container scanning) and repeatable environment bring-up using Helm/Templating.

- Partnered with product/support to triage field issues and reproduce them locally; provided pragmatic fixes and clear workarounds.

- Wrote **developer guides and customer docs** that reduced onboarding friction and made upgrade paths predictable.

## Dootrix - *Software Engineer – Remote / Wickham*

**Mar 2020 – Jul 2021**

- Shipped **onboarding flows** in .NET Core + React (email verification, password reset, MFA prompts), improving completion rate and cutting support tickets.

- Built and maintained **REST endpoints** and client SDK bits used by the front end; added request validation and helpful error responses.

- Automated **CRM integration** with Azure Functions (webhooks, queue-backed retries), removing manual data entry and saving >20 hours/month.

- Introduced **test-first habits** (xUnit/Jest/Playwright), stabilising releases and raising confidence; coverage moved into the 90s and production rollbacks dropped.

- Added **telemetry** (application logs, traces, dashboards) so PMs could see funnel drop-offs and prioritise the right fixes.

- Took part in **code reviews, grooming, and demos**; gave actionable feedback and kept tickets small so changes shipped steadily.

## Zupa *- Software Engineer* - *Southampton*

**Sep 2019 – Mar 2020**

- Built **high-traffic checkout features** in .NET Core handling ~£1M+/mo; focused on resilience and quick recovery paths.

- Integrated **Stripe** with idempotent payment flows, clear error handling, and safe retries; maintained 99.99% uptime for payment processing.

- Tuned **SQL** (indexes, query shape, connection pooling) to reduce CPU and cut slow-query tail; improved average page times and support NPS.

- Wrote small **background jobs** for reconciliation and notifications; added monitoring and alarms so issues surfaced early.

- Collaborated with QA and design to land changes without noise; kept PRs tidy and documented edge cases for handover.

# Core Skills

**Backend & Languages:** Go (**Golang**), C#, TypeScript/Javascript

**Frontend**: React, Next.js, GraphQL APIs, **RESTful APIs**

**Cloud & DevOps**: **Amazon Web Services (AWS),** Azure, Docker, Kubernetes/**OpenShift**, Terraform, GitHub Actions

**Data & Messaging**: PostgreSQL, SQL Server, Redis, RabbitMQ

**Testing & Observability**: Jest, Playwright, xUnit, k6, Prometheus, Grafana, **secure coding practices**, code reviews

# Education

**BSc. Computer Science** (2:1), *University of Liverpool* (2015–2019)  
- **Dissertation:** Python minimax AI for board games (move ordering + heuristics); compared search strategies and profiled bottlenecks.

**- Project:** Real-time object detection with OpenCV (C++), experimenting with feature descriptors and basic tracking.

**- Modules:** Algorithms & Data Structures, Databases, Distributed Systems, Operating Systems, Networks, Software Engineering.

**- Extras:** Hackathon participation and small side projects (CLI tools, web scrapers); lab demonstrator for first-year programming workshops.

**A-Levels**, *Isle of Wight College* (2013–2015)  
- **Chemistry** (A\*), **Physics** (A), **Mathematics** (A)