

Travis Higgins

Software Engineer

OVERVIEW

C#/ .NET backend software engineer with experience in financial services delivering client-requested features for a front-office order management system (investment management platform). Developed an internal RAG chatbot using Amazon Bedrock and AWS Lambda to centralise documentation and improve knowledge discovery. Implemented end-to-end observability with OpenTelemetry and Splunk to accelerate root-cause analysis and reduce P1 incident resolution times. Experienced in distributed systems, observability, and chaos testing.

TECHNICAL SKILLS & PRACTICES

Languages: C#, Java, Python, JavaScript

Backend: .NET 8, REST APIs, gRPC, Node.js, Event Driven Messaging (MQTT pub-sub)

Databases: SQL Server, MongoDB (NoSQL)

Platforms & Infrastructure: AWS, AWS Lambda, Amazon S3, Docker, Linux

Observability & Performance: OpenTelemetry, Splunk, Prometheus, Grafana, Locust

DevOps Practices: CI/CD pipeline optimisation, Infrastructure as Code (Terraform), chaos engineering

AI Engineering: Amazon Bedrock, RAG, GitHub Copilot, MCP Server

Practices & Tooling: Git, Scrum (Agile), SDLC, SOLID, object-oriented design, TDD, NUnit, xUnit

Frontend: React, HTML, CSS

Power Platform: Power BI, Power Apps, Power Automate

PROFESSIONAL EXPERIENCE

Software Engineer, S&P Global → Gresham (Sep 2023 – July 2026, Manchester, UK)

Transferred under TUPE in May 2026; responsibilities unchanged

- Engineered and optimised an internal RAG chatbot using Amazon Bedrock, AWS Lambda, and the Stack Overflow Internal API to consolidate documentation and automate query creation, significantly reducing information-retrieval time and removing friction in creating new Stack Overflow posts.
- Modernised the build and release pipeline, migrating the backend engine to .NET 8 and eliminating legacy .NET Framework 4.8 dual-build steps — cutting pipeline build times by 10%.
- Updated Order Management System (OMS) workflows using the Financial Information eXchange (FIX) protocol to suppress transparency flags in Trade Capture Report (TCR) messages per the FCA's 2025 rules, keeping clients MiFID II compliant.
- Restricted API access behind admin-granted permissions, updating the database to grant access only to users active in the last 6 months, removing unused access without disrupting active users.
- Delivered full-stack observability by migrating monitoring, alerting, and logging from Grafana/Prometheus/Loki to Splunk Observability Cloud and Splunk Cloud, deploying SignalFlow alerts via Terraform to enable earlier P1 detection and reduce service disruption.
- Developed an internal metrics dashboard using Power Apps and embedded Power BI dashboards to surface Azure DevOps metrics, integrated into the internal developer portal site.

EDUCATION

MComp (Hons) Computer Science (Integrated Master's) — First Class Honours (Newcastle University, Sep 2019 – July 2023)

PROJECTS

- [Swarm Storm - An Automated Chaos Tool for Docker Swarm Applications](#): Designed and developed Swarm Storm, an automated chaos engineering framework for Docker Swarm applications. Built a full-stack system (React frontend, Node.js backend) to orchestrate CPU, memory, and network fault injection using stress-ng and iproute2, with Locust generating a controlled benchmarking load against a containerised Java web application. Integrated cAdvisor, Prometheus, and Grafana for real-time observability and experiment analytics. Enabled configurable blast radius, node selection, and repeatable automation. Co-authored the short paper and presented the poster at HPDC 2024 in Pisa.
- Internet of Things Edge Cloud Pipeline**: Built an event-driven IoT data pipeline using MQTT (Mosquitto) pub-sub messaging, Raspberry Pi, Prometheus/Grafana, and AWS EC2; evaluated load-balancing under backpressure.