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# Thomas Bartlett

## Senior Software Developer

Self-taught senior software developer specialising in C#/.NET with broad experience across system design, distributed architecture, observability, and infrastructure. I've worked within compliance-constrained client Azure environments on nationally significant rail infrastructure, identifying technical problems at the systems level and leading initiatives from design through to production.

My breadth comes from solving problems wherever they sit rather than staying in one lane. I default to sustainable, practical solutions over elaborate ones, and I care as much about what happens after I've moved on as I do about the build itself.

## Experience

### November 2023 - Present

Asset Insights

#### Senior Software Developer

Building digitised possession management and asset inspection software for Network Rail across six Azure environments within a 12-developer engineering team, under compliance-constrained client infrastructure contracts.

- Designed and built a centralised internal tooling platform across six environments and four Azure subscriptions. Includes event bus management tooling for Azure Service Bus - dead letter inspection, triage, diagnostics, and republishing. Transformed incident response from zero capability to full operational control over every failed message across the business.
- Own design and technical leadership of the Core Product Team - cross-cutting services including chat, notifications, PDF generation, reporting ETL across and more across all projects.
- Built the company's observability practice from scratch - OpenTelemetry, centralised collector, multi-provider output, dashboards, and alerting. Replaced near-zero diagnostic capability with full cross-service tracing, performance visibility, and custom metrics across all services.
- Built shared internal packages enabling plug-and-play observability integration across all services with minimal configuration
- Led containerisation and migration from Azure App Service to Container Apps, eliminating deployment downtime, enabling automated rollbacks, and removing the need for out-of-hours deployments for configuration and release changes.
- Built and maintain all CI/CD pipelines and Terraform IaC across the company. Replaced manually provisioned, inconsistent portal-managed infrastructure with version-controlled, auditable definitions - critical for accuracy in a compliance-constrained client environment.
- Introduced integration testing as a first-class practice alongside unit testing, enabling teams to test real HTTP and external dependency behaviour instead of relying on thousands of low-signal unit tests. Tests now genuinely catch bugs and mean something when they break.
- Write and publish architectural design documentation and technical investigations.
- Mentor junior developers, deliver internal technical sessions and member of the Senior Leadership Team.

## Contact

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## Expertise

### Languages & Frameworks

- C#
- .NET
- Typescript
- React
- Node
- EF Core

### Cloud & Infrastructure

- Azure
- Docker
- Terraform
- Azure Service Bus

### Databases

- Mongo
- SQL Server

### Testing

- Unit testing
- Integration testing
- TestContainers

### Practices & Principles

- System Design
- Event-driven architecture
- Domain & Technical Documentation
- DDD

# Links

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## Linkedin

<https://www.linkedin.com/tom-bartlett>

### July 2023 - October 2023

Fair For You

#### Software Developer

Short-term role at a social enterprise fintech, working on loan recovery systems and legacy modernisation.

- Domain modelled a loan recovery system using DDD principles in collaboration with subject matter experts. Built the full microservice - email parsing, spreadsheet ingestion handling ~50k rows with graceful error handling, and data management.
- Contributed to ongoing migration from legacy .NET Framework system to modern .NET and Azure architecture
- Extended internal reporting tooling with additional data source integration and export functionality
- Maintained legacy system including implementing A/B testing capability and resolving edge case defects

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### April 2022 - July 2023

Asset Insights

#### Graduate Software Developer

- Built a robust datagrid as an efficient Excel alternative, improving data submission and validation in-app.
- Identified and lead a re-architecure of the existing frontend monorepo, vastly increasing development speed & reducing frustration.
- Worked with the open source community to improve third-party packages for our use cases.
- Integrated a finetuned full-text search system into APIs via MongoDB, significantly improving search speed and accuracy.

## Volunteer Work

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### February 2023 - April 2023

Code Your Future

#### Mentor

- Guided bootcamp attendees in focused sessions and coursework assistance.
- Conducted mock interviews and set individualised goals for job readiness.