

RYAN KELLY

Principal Software Engineer

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 rtkelly13

Technologies

Overview

Co-organizer of the **AWS Liverpool User Group** & technical speaker on functional cloud architectures.

Core & Languages

- C# (.NET / Native AOT)
- F# (Functional / Type Providers)
- TypeScript (React / Next.js)
- Python (Data Lake / PyIceberg)
- SQL (MySQL / SQL Server)

Cloud, Data & Infrastructure

- AWS
- Apache Iceberg / Parquet
- IaC (Pulumi / Terraform)
- Elasticsearch
- OpenTelemetry (OTEL)

Engineering & Practices

- Distributed Systems
- CI/CD (GitHub Actions)
- AI Code Agent Workflows
- TDD & High-Throughput Benchmarking

References

Robert Roe — Tech Lead at Zuto
Dan Cartwright — Product Manager at AutoCoding Systems
Contact Details: Provided on request

Personal Profile

Hands-on Principal Software Engineer specializing in scalable full-stack and cloud architectures, high-throughput data processing, and enterprise modernization. Proven track record architecting distributed systems processing billions of events, driving zero-downtime legacy migrations, and establishing modern design systems. Active technical leader, open-source contributor in high-performance .NET/Parquet tooling, and co-organizer of the AWS Liverpool user group.

Employment History

May 2019 - Present

Principal Software Engineer

Sentric Music

- Architected and engineered the core royalty processing system to scale reliably across billions of usage events and financial records.
- Spearheaded enterprise Apache Iceberg adoption and Python data engineering tooling to modernize data lake warehousing.
- Led technical strategy migrating legacy .NET Framework services to modern .NET, establishing a Storybook React design system backed by REST APIs.
- Pioneered AI Code Agent workflows across engineering, optimizing developer experience and autonomous tooling adoption.
- Introduced centralized observability via Serilog, Elastic Stack, and OpenTelemetry (OTEL) for real-time monitoring of event pipelines.
- Standardized CI/CD on GitHub Actions and codified cloud infrastructure using Pulumi for AWS resource management.

Nov 2017 - May 2019

Senior Software Engineer

Zuto

- Engineered high-availability cloud lender integrations on AWS, leading brownfield modernization and cloud porting of critical financial services.
- Established rigorous uptime monitoring, synthetic health checks, and alerting across high-throughput lender API gateways.

Jul 2014 - Nov 2017

Software Engineer

AutoCoding Systems Ltd

- Built packaging line automation software deployed to factory floors worldwide, developing critical features for the automated date and code printing engine.
- Engineered orchestration tooling and workflow logic in C# on top of core device driver libraries for automated packaging machinery.

Education

2012 - 2016

BSc Computer Science with a Year in Industry

University of Liverpool

First Class Honours

Final year dissertation on 3D procedural maze generation with statistical graph analysis, built in Unity 3D with C#, SOLID, and TDD practices.

Open Source & Technical Contributions

2024 - Present

Parquet.SourceGenerator & Parquet.TypeProvider

Creator & Maintainer

GitHub / NuGet

High-performance Roslyn C# source generators and F# Type Providers emitting zero-reflection compile-time serialization for Apache Parquet.

2020 - Present

Resultful & Community Talks

Author & Speaker

Resultful / YouTube

Functional .NET error handling libraries and tech talks advocating F#, compiler tooling, and robust domain modeling.