Thomas Redstone

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Personal Statement

I am a software engineer with a focus on TypeScript, Serverless, React, and Test-Driven Development (TDD). Leading agile teams, I develop efficient web applications that enhance productivity and reduce costs. I designed and implemented a cXML PunchOut integration for GetJohn, eliminating the need for thousands of hours of manual work each year. I also led the development of "Punchout Hub v2" with Laravel & LiveWire, halving development time by leveraging the team's existing Laravel skills. At JD Sports, I developed a TDD-based microservice in TypeScript and AWS Aurora, which solved legacy system bottlenecks and increased order processing to 70 writes/second, preventing system failure and avoiding high replacement costs. For One iota's FTSE 250 client, I managed the migration of their infrastructure to Kubernetes & Docker, achieving annual savings of about £700,000. Beyond my technical contributions, I actively participate in the tech community and enjoy personal development through running and dinghy sailing.

Career Highlights

- cXML PunchOut Integration Development: Spearheaded the design and implementation of a cXML PunchOut integration system for handling millions in annual uniform orders, converting cXML to EDI XML & using SFTP. This innovation eliminated the need for thousands of manual work hours annually, significantly enhancing operational efficiency.
- "Punchout Hub v2" Architecture: Led the architectural design and development of "Punchout Hub v2" using Laravel & LiveWire, incorporating OpenAPI service descriptions. This strategic decision leveraged existing team expertise in Laravel, accelerating development time by 50% compared to learning new frontend frameworks.
- TDD-based Microservice Development: Developed a TDD-based microservice in TypeScript and AWS Aurora to generate unique identifiers, resolving critical legacy system bottlenecks. This solution increased order processing to 70 writes/second, preserved system reliability during peak loads, and extended the legacy system's lifespan, preventing failure and avoiding substantial replacement costs.
- Barcode Generation Microservice: Engineered a microservice for barcode generation, streamlining the order printing process and simplifying returns. This initiative led to annual savings of over £100,000 by reducing printing costs and enhancing operational efficiency.
- Infrastructure Migration Project: Directed the migration of a FTSE 250 client's legacy infrastructure to Kubernetes & Docker, optimizing PHP versions and transitioning to DynamoDB & Nginx. This overhaul resulted in enhanced cost-efficiency and scalability, achieving annual savings of approximately £700,000.

Testimonials

John O' Rourke - November 2023

I worked with Tom occasionally for nearly ten years before we finally got a chance to bring him into the GetJohn team. He's likeable and approachable, and knows a lot about how good software should work - keeping it simple and well structured.

Working with Tom taught me a lot about unit testing, serverless deployment, and other modern techniques. He helped us make some really good technology choices which proved to make us more efficient and capable.

Damilola Romniyi - February 2020

I've worked with Tom on 2 separate occasions. First during my contract at One Iota and second more closely during my time with DataMatters.

I've found him to be a very knowledgeable dev with a clear passion for technology. He's committed to the process of continual learning and can pick up new ideas and concepts with ease.

Additionally, He is very personable and has no issue working closely with others as part of a team or providing support when needed.

I would certainly recommend Tom and think he would make a great addition to any team.

Skills

Node.js

- Extensive experience with Node.js in TypeScript for developing diverse applications, including e-commerce platforms, custom printing kiosk software, and AWS Lambda functions for processing to print-ready templates. - Demonstrated capability in handling extreme load spikes, managing up to 1 million active users.

Serverless - AWS Lambda, CloudFlare Workers, Fargate

Used Serverless Framework in projects, mainly with Node.js written using TypeScript, & experimented with AWS Lambda Layers for PHP & Perl. Replaced an old batch system with a faster, cost-effective solution using recursion & parallel processing, cutting run time from 30+ minutes to under 10 seconds.

Frontend JavaScript/TypeScript

- Specialized in React for creating dynamic and responsive frontend applications, with extensive use of TypeScript to ensure type safety and enhance code quality.
- Proficient in state management with Redux and building SEO-friendly web applications using Next.js.
- Experienced in integrating diverse frontend projects, including single-page applications, mobile apps with React Native, and desktop applications with Electron.
- Adopted various build tools like Vite and Webpack to optimize development workflows.

Programming & Scripting

- Versatile programming skills in Javascript, Typescript, Go, Python, PHP, C#.NET, Perl, with a solid foundation in web technologies (HTML & CSS) and database management (SQL, PL/SQL, T-SQL). Experienced in Git + GitFlow for version control and collaboration.

Positions:

Head of Cloud Development Texecom Ltd.: April 2024-Present

Lead a multi-squad team, modernising Texecom's infrastructure, focusing on cloud-native solutions, automated deployments, enhancing system reliability and Infrastructure as Code.

I started with a small team of 3 developers, with a significant dependency on external contractors and agencies working largely independently, which often lead to new projects that overran and had poor handover to the team, leading to gaps in knowledge, to a team of 8 engineers, supplemented by contractors at times, but with a focus on working either directly within the team, or working on much smaller, focused projects that the team are able to take ownership of before launch, and ensure knowledge gaps are minimised.

Driving forward application development, resolving long overdue, deeply ingrained technical debt, and instigating a drive to unit tests for all new or modified code, and to refactor existing code to improve maintainability, reliability and performance.

Establishing and leading the squad to bring development to bring the development of the Texecom Connect React Native mobile app in-house, and complete a major rewrite of the application, paying off long overdue technical debt and positioning the team to deliver the features the product team had long been waiting for.

Moving from a clickops model, towards full infrastructure automation, and beginning to be able to adopt Platform Engineering principles, both through hands on contribution, and by building the Platform Squad, which has come a long way, delivering repeatable environments, automated pipelines for; database migrations, legacy code deployments, base image and golden image builds, and applying Terraform changes.

Architected and built an event-driven service using API Gateway, EventBridge, Lambda, and DynamoDB, deliberately avoiding queues on the happy path to prevent unnecessary bottlenecks (with DLQs for failure handling). This POC guided the team's production build and forms part of a Strangler Fig migration strategy to incrementally replace the legacy monolith with microservices.

Contract Software Engineer, GetJohn: October 2022-November 2023

Built a cXML PunchOut integration handling millions in annual uniform orders, converting cXML to EDI XML & using SFTP. Involved stringent validation & unit testing.

Specified a TypeScript replacement for a dated PHP ordering portal, choosing tech based on skills & customer value.

Created a Docker build for GetJohn's "Punchout Hub", an API integration platform, improving modularity & efficiency.

Key in building "Punchout Hub v2" using Laravel & LiveWire and adding OpenAPI descriptions of the services. Preserved old code & improved system modularity. Designed a role-based client dashboard & handled hundreds of daily logins.

Promoted better unit-testing practices & streamlined dev environments.

Automated server monitoring & backup setup using Bash scripts.

Lead Software Engineer JD Sports: April 2020-November 2022

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Led the development of a TDD-based microservice in TypeScript and AWS Aurora, which solved critical legacy system bottlenecks, ensuring system reliability and scalability during peak times.

- Engineered a barcode generation microservice that streamlined order processing and simplified returns, resulting in annual savings of over £100,000.

Contract TypeScript Developer, Data Matters: October 2019-February 2020

Part of an Agile/Scrum team, developed a new React front end & serverless backend to replace the old system. Implemented testing practices with Jest, Enzyme, React Hooks, Redux, TypeScript, & AWS SNS, DynamoDB, Lambda.

Contract Perl Developer, SABS Travel Technology: March-September 2019

Maintaining a battle tested Perl backend system, which facilitates all aspects of corporate travel, from the searching, comparison & bookings themselves, to travel polices & approvals.

Software Developer One iota: November 2017-March 2019

- Directed the migration of a FTSE 250 client's infrastructure to Kubernetes & Docker, significantly enhancing system efficiency and generating approximately £700,000 in annual cost savings.
- Coordinated with offshore teams on technical reviews and task distribution, ensuring smooth project execution and delivery.

Software Developer Triangle Software: March-November 2017

Software Engineer Custom Gateway: March-December 2016

Web Developer Fifteen Digital Ltd: March 2015-March 2016

Technical Co-founder BayCrazy Ltd: April 2012-March 2015

Red Eye International: June 2009-April 2012

Education

BSc (Honours) Lower Second Class Computing & IT Practice - The Open University

Foundation Degree in Enterprise Computing - South Cheshire College

BTEC National Diploma in Business - South Cheshire College

Interests

As a passionate advocate for community engagement in technology, I not only organize the Manchester Web Meetup but I' ve also contributed as a speaker there and at Chester Devs. These roles allow me to share insights, foster learning, and stay connected with the latest in web development.

Aside from these community activities, I develop web apps like BargainTime.co and BurglarySupport.com. These side projects demonstrate my dedication to continuous learning and practical application of my knowledge.

Running plays a significant part in my life, too. I' m a member of a local running club and participate in events such as Tough Mudders, half marathons and ParkRun most Saturdays, demonstrating my commitment to endurance and personal growth.

Dinghy sailing is another pursuit I enjoy, not only competing in club races but also supporting my daughter' s participation in junior races nationwide. This hobby sharpens my strategic thinking and adaptability, skills that are invaluable in both my personal and professional spheres.