

TOM BYRNE

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EDUCATION

University of Limerick

2024 – 2027

BSc. Immersive Software Engineering - *First Class Honours 1.1*

Relevant Coursework: *Object-Oriented Programming, Data Structures & Algorithms, Computer Architecture, Operating Systems, Mathematics, AI, Software Testing, Relational Databases*

Johnson & Johnson STEM Scholarship, Y Combinator SF Startup Schol 2026

EXPERIENCE

Susquehanna International Group (SIG) - Dublin, IE

June 2025 - August 2025

Software Engineer Intern

- Currently interning at Susquehanna International Group as a software engineering intern, working on a low-latency matching engine system for trading financial instruments.

Amazon Web Services - Dublin, IE

September 2025 - December 2025

Software Engineer Intern

- Developed an internal tool for the Lambda Control Plane Functions team to automate the categorisation and analysis of tickets in a large backlog, increasing observability for customer-impacting tickets.
- Developed a CLI tool using Python to bulk analyze tickets in-depth using AWS Bedrock and iterative reasoning with an internal MCP server. This also generates summary documents for users.
- Created a TypeScript and React web app with a Lambda backend to categorise tickets and display categorisation results for the entire backlog. This helped reduce the team's ticket backlog by 21%.

Stripe - Dublin, IE

June 2025 - August 2025

Software Engineer Intern

- Worked on the Test Data Infrastructure team to enable copying live merchant configuration metadata into the QA environment, reducing reliance on production for testing.
- Built end-to-end data pipeline using Ruby with SQL for metadata collection, S3 for intermediary storage, and Java workflows with gRPC APIs to reconstruct merchants in QA.
- Extended initial project scope to support complex multi-merchant organisations with hierarchical structures (e.g., platforms with thousands of sub-merchants).
- Optimised Stripe's internal Scenarios tool to support bulk merchant updates, replacing inefficient sequential operations and significantly improving performance at scale. This reduced RPC calls by 90%.

PROJECTS

Kepri Solar | *Next JS, TypeScript, Tailwind CSS, Supabase*

- Designed a frontend web-application for displaying live solar panel inverter statistics and financial information for a cloud-based energy management system, utilising Next JS, TypeScript, and Supabase.
- Worked as part of a team of 5, worked closely with potential customers, and participated in the Spring 2025 NDRC Pre-Accelerator. Project featured in Business Post 2024 Ireland's 30u30 article.

Minti - Personal Finance Dashboard | *Next JS, TypeScript, Tailwind CSS, Supabase, Plaid*

- Built a full-stack finance platform integrating with users' bank accounts via Plaid for real-time balances, transaction history, budget tracking with category-based spending limits, and savings goals.
- Integrated an AI financial assistant powered by Claude with custom tool calls to query account balances, analyse spending patterns, and provide personalised financial advice based on the user's banking data.

University Co-Op Jobs Board | *Ktor, Kotlin, Next JS, TypeScript, Tailwind CSS, Supabase*

- Designed a platform for companies and students rank preferences, assign interviews, and match based on a Gale-Shapley algorithm. Developed as a team of three.
- System allows administrators to invite new members and run matching algorithms, companies to post jobs, and students to create profiles; utilising supabase with authentication and RLS policies for security.

Procure - Iterate Paris Hackathon (Overall Winner) | *Next JS, TypeScript, Supabase, HighCharts*

- Developed a web app for analysing large procurement datasets and creating dynamically generated dashboards via HighCharts and adjustable CloudScape widgets with audio/video summarisation.
- Processed large CSVs using dynamic SQL queries to create a stratified sample set, which is fed to an LLM utilising custom tool calls generating HighCharts configuration JSONs for dashboard graphs.

SKILLS

Languages: Java, TypeScript, Python, Ruby, Kotlin, SQL, C

Frameworks/Libraries: React, Next JS, gRPC, JUnit, Flask, Matplotlib

Tools/Platforms: Git/GitHub, Supabase, Firebase, Vercel, Postman, S3, Bedrock, Lambda