Steven J Baird

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PROFILE

Software Engineer at J.P. Morgan Chase working on data lineage and event observability infrastructure across the firm. First generation Computer Science graduate with a strong interest in security, low-latency systems and quantitative finance. Building side projects in my own time and continuously learning beyond my day job.

EXPERIENCE

J.P. Morgan Chase & Co. Glasgow, UK

Software Engineer Analyst *September 2025 – Present*

- Working on Broadsword, a data lineage and event tracking platform operating across the entire firm and its lines of business, with primary use cases in market risk, regulatory reporting and data observability
- Building and maintaining event-driven microservices using Java, Apache Kafka and MongoDB to track and visualise the flow of data across JPMC infrastructure
- Contributing to internal tooling that provides engineering and compliance teams with real-time visibility into data pipelines across the organisation

EDUCATION

University of Strathclyde Glasgow, UK

BSc (Hons) Computer Science — 2:1 *September 2021 – May 2025*

- Foundations of Artificial Intelligence, Computer Systems & Concurrency, Computer Security, Web/Mobile App Development, Functional Programming, Building Software Systems

DISSERTATION

Analysing the Security of OAuth 2.0: How PKCE Mitigates Authorisation Code Attacks

- Built a Next.js app integrating Google, Keycloak and Solid OAuth providers with a PKCE toggle. Simulated a MITM attack using mitmproxy to intercept OAuth 302 redirects, demonstrating successful token exchange via Postman when PKCE was disabled
- Developed a Python automation script via mitmdump and conducted token lifespan analysis across providers — proving PKCE cryptographically binds the authorisation code to a client-specific verifier, preventing exploitation upon interception

SKILLS

Languages: Java, Python, TypeScript, C, Rust, JavaScript

Technologies: Apache Kafka, MongoDB, Supabase, React, Astro, Docker, Git, Node.js, LlamaIndex, spaCy

Exploring: Low-latency systems, quantitative finance, quantum computing