

Elliott McPherson

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Professional Summary

Final-year Software Engineering student at Queen's University Belfast with hands-on experience at Rapid7. Strong background in backend **Java development**, secure cloud infrastructure, and technical expertise in low-level fault analysis for on-premises applications. Successfully deployed **production-grade SaaS applications** using Kubernetes and Spinnaker. Known for improving system performance, reducing AWS costs, and implementing security-first processes. Passionate about scalable design, fintech, and cybersecurity.

Technical Skills

Languages: Java, Python, JavaScript (Node.js, React), TypeScript, C++, Flutter, CSS/HTML

Cloud: AWS (Lambda, ElastiCache, SQS, SNS, CloudWatch), GCP (Cloud Run, Firestore)

DevOps & IaC: Kubernetes, Spinnaker, Terraform, Docker, Jenkins, Git

Testing/CI: Maven, Mockito, Cucumber, LocalStack, GitLab (.gitlab-ci.yml)

Security/Monitoring: Snyk, Wireshark, DataDog, IDA

Databases: PostgreSQL, MongoDB

Practices: Agile, Scrum, TDD, Pair Programming

Tools: Jira, Miro, Lucidchart

Professional Experience

Software Engineering Intern

Rapid7, Belfast — Jun 2023 – Jun 2024

- Deployed a SaaS platform into production using **Kubernetes** and **Spinnaker**, contributing to customer-facing delivery.
- Provided critical maintenance and bug resolution for an enterprise Java **Spring Boot** SaaS application.
- Collaborated within an agile team environment to ensure platform stability and reliability.
- Refactored legacy Lisp-based systems into **Java**, improving reliability and extensibility.
- Reduced AWS infrastructure costs by **18%** through resource usage analysis and optimization with ElastiCache.
- Designed cloud architecture documentation to streamline team onboarding.
- Built and presented a **Snyk-based vulnerability remediation workflow**.
- Acted as Scrum Master, leading daily stand-ups and retrospectives.
- Managed cloud access with **Terraform**; monitored pipelines via **K9s** and CloudWatch.

Education

Beng Software Engineering

Queen's University Belfast | Sep 2021 – Jun 2025

Predicted: 2:1

Key Modules:

- Cloud Computing (81%)

- Professional Skills (82%)
- Artificial Intelligence (67%)

A-Levels – Ballymena Academy

Engineering (A*), Physics (C), Media (B)

GCSEs – Ballymena Academy

Maths (A), English (A)

Technical Projects

StudentWallet – FinTech Web Application (*Dissertation*)

Stack: React, Node.js, Firebase, Plaid API, GCP

URL: <https://studentwallet-4e2ca.web.app/>

- Built a full-stack budgeting platform with secure **bank connectivity** via Plaid.
- Deployed on **Google Cloud Run** with intelligent autoscaling and load balancing, enabling seamless performance during high traffic and reducing to **zero containers** when idle to optimize cost-efficiency.
- StudentWallet offers comprehensive maintenance loan tracking, custom budgeting, personalized financial advice based on spending patterns, email notifications, and secure bank integration.

Cloud Computing Microservices

Stack: Python, Go, Java, Swift, Node.js, Ruby, Kubernetes, Nginx

- Designed and deployed containerized services in multiple languages.
- Implemented **Nginx reverse proxy** for performance and load balancing.
- Managed multi-environment microservice orchestration via Kubernetes.

Study Buddy – Student Matching Platform (*In Progress*)

Stack: React (TS), Java (Spring Boot), MongoDB

- Matchmaking system to pair students by learning style and schedule.
- Implementing backend services using **Spring Boot** and MongoDB with REST API-based logic.
- Designed as a software solution to address the social and academic integration challenges faced by **neurodivergent and international students**, helping them connect with compatible study partners within their course.

Additional Skills

- Excellent Technical Presentation & Public Speaking
- Efficient Project Management with Jira, Trello, Miro
- Engaging Documentation (Lucidchart, system diagrams, Confluence)
- Empathy-Driven Team Collaboration
- Fast Learner & Adept Problem Solver

References

Adam Smith, Rapid7 — asmith@rapid7.com

Connor Fleming, Rapid7 — cflaming@rapid7.com