Emma Oatley

Software Engineer

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Professional Profile

Software Engineer with 3 years of experience in backend and full-stack development, specialising in Scala and TypeScript. Experienced in maintaining microservices deployed on cloud-native infrastructure, with hands-on work in Kubernetes and event-driven systems. Strong foundation in mathematics and a keen interest in functional programming.

Primary stack: Scala, TypeScript, JavaScript, Node.js, React, PostgreSQL, Kubernetes

Work History

02/2025 – Present

Professional Development
Munich, Germany

- Relocated to Munich and completing an intensive B2-level German language course.
- Developing *WortSchatzKiste*, a personal Scala backend project for a German - English vocabulary app.

02/2023 – 02/2025

Engineer
Sainsbury's - sainsburys.co.uk | London, UK (Hybrid)
Supermarket and Retailer
Tech stack: Scala, Akka, Shell, Airflow, PostgreSQL, Jenkins, GitHub Actions, Grafana, DataDog, New Relic, Kafka

- Maintained 20+ microservices powering the retail pricing and promotion engines.
- Led the migration of microservices from legacy Mesos infrastructure to Amazon EKS, improving scalability and maintainability. Designed the GitHub branching and deployment strategy and reconfigured services to use Kubernetes API for service discovery instead of Consul.
- Enhanced system stability by refining error handling, alerts, and documentation, ensuring eligible customers received correct loyalty points.
- Mentored a group of graduates, supporting their growth in both technical and soft skills.

- Completed a 3-day AWS course on *Running Containers on Amazon Elastic Kubernetes Service*, strengthening expertise in cloud-native deployments.

04/2022 – 02/2023	**Associate Engineer**

Associate Engineer
Sainsbury's - sainsburys.co.uk | London, UK (Hybrid)
Supermarket and Retailer
Tech stack: TypeScript, Node.js, React, MongoDB, Kafka

- Worked in a full-stack team responsible for being the source of truth for retail promotion data.
- Implemented a feature to unlock a new type of loyalty promotion.
- Collaborated with a Data Engineer to design a complex promotion data model and implemented it in Mongoose for MongoDB.
- Actively participated in and led agile ceremonies.

08/2019 – 08/2021 **Maths Teacher**
Westminster Academy - westminsteracademy.org.uk | London, UK
State Secondary School for students aged 11 – 18
Taught: KS3, GCSE Maths, IB Maths Applications and Interpretations

- Supervised student projects on Data and Statistical Analysis.
- Designed automated mail-merges to routinely communicate with parents about student engagement and progress.

Education

10/2021 – 02/2022 FULL STACK CODING BOOTCAMP (PERN stack)
Academy – academy.tech
London, UK (Hybrid)

09/2018 – 06/2019 PGCE IN MATHEMATICS WITH QTS (Teaching qualification)
Canterbury Christ Church University with Imperial College London
London, UK
Distinction

10/2014 – 06/2018 MSci Mathematics
Imperial College London
London, UK
2.1

Languages

English (native), German (B2, in progress), French (basic, formerly B1)