

JAMES CAMERON-BURN | CV

Senior Software Engineer

Birth Name: James Cockburn

PhD Thesis: <https://arxiv.org/pdf/1707.08221>

Core Skills: Python, AWS, CI/CD, IaC, Docker, SQL, TypeScript

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Summary

I am a self-motivated and passionate software engineer with a wide range of experience in modern software engineering technologies and practices. I have a penchant for learning and for making other people's lives easier through the use of technology.

Professional Experience

Senior Software Engineer, Platform/DevEx Team - Wayflyer

July 2022 - present

- Fully designed and implemented an anonymise-then-clone system for developers to safely and efficiently test against production data locally
- Fully designed and implemented a regression test system leveraging that functionality, opening a whole range of new testing capabilities
- Proactively overhauled the authentication system for the main application, discovering and closing a critical vulnerability along the way
- Implemented fundamental changes to the signup process to improve end-user experience and data quality

Senior Software Engineer, Platform/DevEx Team - Skyscanner

Sep 2017 - July 2022

- Independently implemented a process for language version migrations, enabling 300 services to move from Python 3.6 before it became end of life
- Introduced CI-time Docker Image acceptance tests to proactively catch regressions
- Designed and implemented the cross-AWS-account orchestration layer for the in-house CD tool
- Maintained and improved in-house microservice libraries and Docker base images for Python, Java and Node.js

Side Projects Experience

Sole Technical Contributor/Full Stack Software Engineer - My Money Mage

October 2024 - present

- Full and continuous technical responsibility of a service for financial management, mymoneymage.com
- Technologies include: Next.js, Golang, ReactJS with react-router, AWS and Auth0

Sole Technical Contributor/Full Stack Software Engineer - Learn with Dr Laura

July 2023 - present

- Full and continuous technical responsibility of a professional tutoring business, learnwithdrlaura.com
- Fully designed and implemented all aspects, including static marketing content and an authenticated user-facing application for lesson management
- Technologies include: nginx, Vue.js, FastAPI, AWS Route 53, AWS DynamoDB, AWS EC2, AWS SES, AWS Cognito and Python asyncio

Education

PhD Student in Theoretical Particle Physics - University of Edinburgh

Aug 2013 - Sep 2017

- Mathematical calculations of particle collision events within the High Energy Jets (HEJ) framework
- C++ implementation of numerical integration techniques, developed within the existing HEJ framework

MSci Theoretical Physics - University College London

Aug 2009 - Aug 2013

- Graduated with First-Class Honours
- Embedded Master's project included learning C++ from scratch to rewrite a FORTRAN codebase to perform quantum mechanical calculations