

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, 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 - Wayflyer

July 2022 - present

- Fully designed and implemented an anonymise-then-clone system for developers to test against representative data
- Fully designed and implemented a regression test system leveraging that functionality
- Implemented CLI tooling to allow developers to work on a remote machine whilst remaining within a provided Docker devcontainer
- Implemented fundamental changes to the signup process to improve user experience and data quality with zero downtime

Software Engineer/Software Engineer 2/Senior Software Engineer - Skyscanner

Sep 2017 - July 2022

- Independently implemented a process for language version migrations, resulting in around 300 services moving from Python 3.6 before it became end of life
- Introduced CI-time Docker Image acceptance tests to proactively catch regressions
- Maintained and improved in-house continuous integration and continuous deployment systems
- Maintained and improved in-house microservice libraries and Docker base images for Python, Java and Node.js

Side Projects Experience

Full Stack Software Engineer - New Project

October 2024 - present

- Currently developing a new web application in the field of finance management
- Technologies include: Golang, ReactJS with react-router, AWS and Auth0

Full Stack Software Engineer - Learn with Dr Laura

July 2023 - present

- Full technical responsibility of a professional tutoring business, learnwithdrlaura.com
- Fully designed and implemented the site which includes 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 to solve the equations in the existing HEJ codebase
- Undergraduate tutoring, with courses covering Quantum Mechanics, Mathematical Physics and Python

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
- Awarded a prize for 'Best use of software in an undergraduate project'