

JOSHUA COLES

Full-stack Developer

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🌐 Personal Gitea
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WHO AM I?

Software Development is a profession and a hobby. My drive over 10 years as always been addressing real problems that I encounter with the tools to hand — treating specific technologies as secondary to understanding the organisational context of the problem, not having them stand in the way of a correct solution. In my work at the ONS, I was responsible for software delivery, helping to manage a large team of contributors under a tight timeframe. My recent work surrounding AI has shown me its use in solving otherwise intractable problems and providing insight into unstructured data and, I am excited to explore its further applications.

Typescript ██████████
React ██████████
Rust ██████████
Python ██████████
Git ██████████
Ruby ██████████

EXPERIENCE

Summer 2023

Developer

Amphora

I lead efforts exploring the feasibility and application of AI based features in the main product.

- Implementing vector based search and retrieval-augmented generation into the application in a non-intrusive manner.
- Presenting work to customers and facilitating input on direction and feature fit.

Langchain / Weaviate / Python

2022 – 2023
part time

Software Developer

Office for National Statistics

For my placement I joined a team working on software for processing the results of the 2021 Census. After the end of my placement I was kept on to assist with the next phase of product development and solution design. Key contributions include,

- Taking a leading role as release manager for the product and was heavily involved in requirements gathering for the new features.
- Developing tools for debugging and observability in sensitive production environments.
- Restructuring a core service to decrease code duplication and increase test & type coverage.
- Designing solution architectures for future project development.

This role gave me an appreciation for how the interpersonal aspects of successful team are crucial for the overall success of a project. This was especially important when interfacing with the business side of the organisation on the direction of the project.

React / Express / Jest / Cypress / Redis / SQL / Postgres / HBase
/ Cloudera / Jenkins / Docker / Typescript / JavaScript / Linux /
Microservices / Agile / Scrum

2017 – 2021
Holidays & Part time

Software Developer

Amphora

I focused on independent exploration and investigation of new technologies.

- Implementing and maintaining SAML based customer access mechanism for confidential documentation.
- Designing subscription management product using Wordpress as a Headless CMS for presentation under multiple service offering.

SAML / Groovy / Java / Ruby on Rails / Ruby

2011 – present

Ongoing Personal Projects

My latest personal projects are focused on data analysis, data pipelines and warehouses to provide insight into my own life. A history of these is available on my [GitHub](#) or [personal gitea](#).

Rust / CI/CD / Postgres / Caddy / Docker / System administration of
internet connected servers

EDUCATION

2019 – 2024	MSc Mathematics and Physics (Hons) Expected classification: 2:1	University of Bath
Graduated 2019	Prior Qualifications, Graduating 2019 4 A Levels: A* Maths, A Further Maths, A Physics, A Chemistry GCSEs: 1 A* with distinction, 8 A's, 2 A's, 1 B. Including A* with distinction in Further Maths, A's in Maths, Sciences, English and Computing.	Reading Blue Coat School

ADDITIONAL QUALIFICATIONS AND TRAINING

Better Conversations — 2022
ISO9001 and ISO27001 training — 2018

INTERESTS

Long distance running; politics and governance and the applications of technology therein; committee member of Philosophy Society at University.

REFERENCES

Employment Reference	Mathew Cooke Email: mathewc@amphora-research.com Contact Number: +44 1344 28863 Address: Molly Millars Lane, Unit 6, Wokingham, RG4	Director of Operations, Amphora Research Systems
Charater Reference	Steve Gibbard Line manager and Tech Lead while at Office for National Statistics DevOps Technical Lead, Office for National Statistics Email: steve.gibbard@ons.gov.uk	DevOps Technical Lead, Office for National Statistics
Academic Reference	David Tsang Project Supervisor Email: dcwt21@bath.ac.uk Research Profile	Senior Lecturer, Department of Physics, University of Bath