

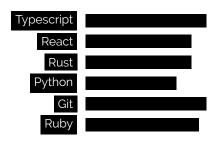
Full-stack Developer





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 Al 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.



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

2021 - 2022 placement year

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 reguirements 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.

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{\tt React / Express / Jest / Cypress / Redis / SQL / Postgres / HBase}
/ Cloudera / Jenkins / Docker / Typescript / JavaScript / Linux /
Microservices / Agile / Scrum
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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
- · 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

Graduated 2019 **Prior Qualifications, Graduating 2019** **Reading Blue Coat School**

University of Bath

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.

ADDITIONAL QUALIFICATIONS AND TRAINING

INTERESTS

Better Conversations - 2022 ISO9001 and ISO27001 training - 2018 Long distance running; politics and governance and the applications of technology therein; committee member of

Philosophy Society at University.

REFERENCES

Employment **Mathew Cooke Director of Operations, Amphora Research Systems**

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Charater **Steve Gibbard DevOps Technical Lead, Office for National Statistics**

Reference Line manager and Tech Lead while at Office for National Statistics

DevOps Technical Lead, Office for National Statistics

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Academic **David Tsang** Senior Lecturer, Department of Physics, University of Bath

Reference **Project Supervisor** Email: dcwt21@bath.ac.uk

Research Profile