Ross Fenning

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rossfenning **in**
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PERSONAL PROFILE

I am a systems engineer, technical leader/consultant with a holistic approach to Systems, DevOps and software development and delivery. This includes software development itself, architecture, continuous delivery, reducing duplicated effort and the human side of how teams ship changes safely at pace.

Roles I would be looking for next would be Staff or Principal Engineer roles or contract development roles. My primary experience is in Java or Python ecosystems, but I also thrive in polyglot contexts and can be a generalist when needed. I have extensive experience in Cloud Native systems, AWS, Kubernetes and full automation of delivery and deployments (CI/CD).

SKILLS

Expert Agile, Apache HTTP Server, AWS, BDD, Continuous Delivery, Cucumber, Debian/Ubuntu, DevOps, Flask, Git, Java, Jenkins, Kanban, Linked Data, Maven, nginx, Python, Quarkus, RDF, Red Hat/CentOS, REST, Scrum, Spring Boot, SQL, Systems Thinking, TDD, Troposphere, UML

Advanced Apache Spark, AWS EKS, AWS Glue, AWS Lambda, AWS MSK, Big Data, Design Thinking, DevOps, Django, Docker, Elasticsearch, GNU Make, Gradle, Jupyter, Kubernetes, LaTeX, Linux, Node.js, OpenSearch, PostgreSQL, RabbitMQ, Serverless, Solr, Terraform

Intermediate ActiveMQ, FastAPI, GCP, Kafka, PostGIS, Prolog, Redis, Ruby, Selenium, Soft Systems Methodology, SPARQL, Typescript

EXPERIENCE

Lead Software Engineer at INRIX   2022-12 to 2024-04
- Lead role across 2 teams distributed between Manchester, UK and Kirkland, USA (8 reports).
- Built standard deployment platform on Kubernetes (AWS EKS), Quarkus, Terraform, Github Actions.
- Developed standardised way to provision (via Terraform) Kubernetes across the company with monitoring and observability baked in.
- Mentored on Continuous Delivery, infrastructure as code and DevOps.
- Built event-driven traffic alerting using Kafka, RabbitMQ and Reactive Java (Quarkus).
- Build and led a Python project for testing deployed services and validating data output.
- Innovated Python project for applying BDD to an AI/LLM-based project.

Principal Software Engineer at BBC North   2015-06 to 2022-12
- Technical leader on highly-available Node.js and Spring Boot APIs used by whole BBC website.
- Mentoring and leading on projects to promote knowledge sharing.
- Drove architecture and data modelling for a unified approach to website analytics collection.
- Developed lightweight feature flag mechanisms to allow instant rollout of visual changes while allowing stakeholders and designers to see changes privately in situ any time.
- Developed and then promoted a unified approach to CD (Jenkins) and deployments (AWS Cloudformation) across 30+ services between up to 4 teams.
- Led on Python tooling for automating deployments, common infrastructure patterns and testing.
- Developed and led on a federated network of dashboards in Python (Flask, aiohttp).

Senior Software Engineer at BBC North   2012-02 to 2015-06
- Developed event-driven data pipelines with Java (Jersey), Apache Camel and ActiveMQ.
- Built tooling in Ruby and Cucumber to drive projects via BDD and TDD.
- Created a system similar to Docker Compose (but pre-dating that and using Tomcat as the container) for running services and dependencies during builds for full integration testing.

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[1]If old, there may be an updated version at https://rossfenning.co.uk/

Contract Software Engineer at BBC Cymru Wales   2010-12 to 2012-02
· Building data aggregation services in Java (Spring MVC)
· Contributed to some front end in PHP and JS on the BBC Home page.
· Creating geospatial BBC Weather search using Solr and PostGIS

Systems Developer at Cranfield University   2007-04 to 2010-06
· Building in-house Java solutions to connect various systems in the IT department.

Fundraiser at Tim Lilley Fundraising   2005-10 to 2006-12
· House to house fundraiser on behalf of Amnesty International.

Tester at Transversal Corporation   2005-07 to 2006-02
· Manual and (Python) automation tester for a web-based software product.

Tester at Level 5 Networks   2004-07 to 2004-09
· Performance testing for a new Ethernet card and drivers on both Linux and Windows.
· Created via bash scripts an early version of what today would be called Continuous Integration.

OPEN SOURCE PROJECTS

voltaire An opinionated Python toolkit built on top of Pelican static site generator to do common templates and processes across multiple static websites.

testypie A Python test library for recording outbound HTTP requests during tests and saving the response as a mocked fixture.

pokr A Python framework for building OKR/KPI dashboards. Provides hooks for generating metrics from 3rd party sources.

doctrine Library using Python metaprogramming to allow central definitions of shared tasks for the `invoke` task runner.

quinta Python cli tool for generating content, Google Search and Google Analytics reports across multiple websites.

EDUCATION

MSc Software Engineering at University of Bradford   2016
· MSc in Software Engineering and Internet Architecture.
· Awarded by Bradford, run in conjunction with the BBC.
· Passed with distinction.

MA Computer Science at University of Cambridge   2005
· MA (Hons) (Cantab) in Computer Science.
· Passed an intermediate German via University of Cambridge Language Centre.

INTERESTS

· Traditional music including playting Bodhrán and Tin Whistle
· Karate
· Wine (WSET 2 qualified)
· Real Ale (CAMRA member)
· Philosophy
· Computer Science, Category Theory, Pure Mathematics

PUBLICATIONS

· Fenning, R., Dogan, H., Phalp, K. (2014). Applicability of SSM and UML for Designing a Search Application for the British Broadcasting Corporation (BBC).