DR. JACK WALTON

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"PhD educated and analytical problem solver enjoys challenging and intellectually stimulating work"

Education

University of Newcastle upon Tyne, UK   📅 *2016–2020*
🎓 *PhD, Applied Mathematics*
📎 *"Bayesian Inference for Models of Collective Behaviour"*

University of Newcastle upon Tyne, UK   📅 *2012–2016*
🎓 *Master of Mathematics, 1st Class*

Work Experience

Data Scientist, Trainer and Data Engineer   📅 *2020–Present*
💼 *Jumping Rivers Ltd.*

Notable Client Projects

- **aws** *AWS Lambda for parameterised PDF reports*   *Lead Developer*

  Created a custom container runtime with Docker to serve parameterised PDF reports via {rmarkdown} and AWS API Gateway.

  Automated deployment with GitHub Actions and Terraform.

- ⊞ *Azure Databricks & Azure App Service for scalable web apps*   *Lead Developer*

  Administered Databricks and prepared init scripts for R workloads.

  Adapted existing ETL R scripts to write results to blob storage via {AzureStor}.

  Improved typical application deploy time from ∼20mins to ∼2–3mins.

Responsibilities & Achievements

- Taught over 250 hours of Python programming courses, with course difficulty ranging from "what is a variable?" to machine learning with `sklearn`.

- Employed Ansible and Terraform to manage, provision and configure client and internal infrastructure, working with a number of different cloud providers.

- Collaborated on the development of a suite of R packages to standardise and simplify internal project management and automate recurring tasks.

- Developed, curated, and delivered courses on the probabilistic programming language Stan, best-coding practices and how to implement them, and getting the most out of RStudio Connect as a data scientist.

Skills

- 📢 Confident and competent speaker; adept at communicating technical concepts to non-technical audiences.

- **git** Harnessed version control on all code-based projects, and used CI/CD tools to aid code stability and enforce good-coding practices.

Additional Experience

- Regular contributor on Stack Overflow—answering over 130 questions, and reaching >275k users.
- Maintainer of jwalton.info, a programming blog and personal website which attracts 800–1000 unique monthly users, with ∼85% of traffic acquired through organic search.
- Worked as a tutor at Newcastle University's maths consultancy service; helping students and staff solve a broad variety of problems with maths and statistics.

Awards

Northumbrian Water Hackathon *July 2019*
Best team solution

UK Conference on Multiscale Biology *April 2018*
Best poster award

EPSRC *2016–2020*
PhD project funding (3.5 years)