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 & Data Engineer   📅 *2020–Present*
💼 *Jumping Rivers Ltd.*

Notable Client Projects

    aws *Serverless & massively scalable web app with AWS*   *Lead Developer*

      Created a custom R runtime with Docker to serve a Bayesian network model, parameterised PDF reports and plots via AWS Lambda and API Gateway (`github.com/nationalarchives/diagram/tree/live/api`).

      Developed Terraform for IaC (`github.com/nationalarchives/DiAGRAM-terraform`).

      Automated frontend and backend deployment with GitHub Actions.

    ⊞ *Azure Databricks & App Service for ETL*   *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 $\sim$20mins to $\sim$2–3mins.

Responsibilities & Achievements

    ▤ Training tech stack lead; prioritised, performed and delegated development and maintenance work to support delivery of JR training courses. Stack including: Packer, Docker, Ansible, R packages, the Posit (formerly RStudio) Team platform, and more.

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

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

    ☁ 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.

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.
- Confident performing all manner of duties from a CLI, scripting in bash, and using standard command-line tools such as `ssh`, `grep`, `sed`, `vi`, etc.

Community

- Chief-organiser and chair of North East Data Science meetup series, overseeing ∼50% growth in group membership. Co-organiser of North East Databricks meetup series.
- 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.

Awards

Dynamites22   📅 *November 2022*
🏆 *Rising Star (shortlist)*

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)*

References

Available on request