DR. JACK WALTON

📍 jwalton.info   ✍ user:11021886   🐙 jwalton3141

✉ jwalton3141@gmail.com   📞 +44 (0)7834 xxx xxx   📍 Newcastle upon Tyne, UK

"PhD educated and analytical problem solver seeks 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*

Experience

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

Notable Client Projects

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

Used Docker to productionise a Bayesian network model (implemented in R), parameterised PDF report and data visualisation generation, via AWS Lambda and API Gateway (`github.com/nationalarchives/diagram/tree/live/api`).

Developed Terraform for IaC, provisioning development, staging and production environments (`github.com/nationalarchives/DiAGRAM-terraform`).

Automated front and backend deployment, controlling application life cycle with GitHub and 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 ~20mins to ~2–3mins.

Responsibilities & Achievements

Training tech stack product owner; prioritised, performed and delegated development and maintenance work to support delivery of JR training courses and associated training materials.

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

Developed and delivered courses on the probabilistic programming language Stan, data 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

| Python | R | Stan | bash | git | Ansible | Terraform | Docker | Packer |

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

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

git "Intermediate" git user, harnessing version control on all code-based projects, and using CI/CD tools to aid code stability, dictate release cycles, and enforce good-coding practices.

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)*