

Gabriel-Mateus Bernardo Harrington

Data Analyst / Computational Biologist

🌐 mateusharrington.com | 🐙 [GitHub: H-Mateus](#) | [LinkedIn: gmb-harrington](#) | [ORCID: 0000-0001-6075-3619](#) | 📍 United Kingdom

Summary

Scientist-turned-analyst with 7+ years' experience in high-dimensional biological data analysis, reproducible research, and statistical modelling. Expertise in R, bash, super computing and omics data (transcriptomics, proteomics, EHR). Passionate about clean, reproducible pipelines and cross-functional collaboration. Seeking remote or international roles where I can apply my analytical skills to impactful, real-world problems.

Employment

Cardiff University, UK — *Research Associate (Bioinformatician)* - 2021–Present

- Analysed multi-omics data in Alzheimer's research; developed pipelines using R and bash on HPC.
- Delivered training in reproducibility, version control, and workflow automation.

Bionics Institute, Australia — *Research Assistant* - 2016–2018

- Supported proteomics workflows and wet lab experiments; early bioinformatics involvement.
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Selected Projects & Achievements

- **Alzheimer's Disease single-cell RNA-seq analysis:** Built reproducible workflows to analyse single nuclei sequencing data, including differential expression, genetic risk and pseudotime analysis.
 - **Spinal Cord Injury Prognostic Modelling:** Applied multilevel and classical statistical models to proteomic and EHR data.
 - **Shiny Applications:** Created interactive apps for transcriptomic and prognostic model exploration.
 - **Research Software Champion:** Led reproducibility training and open science efforts across the UK DRI.
 - **Community Leadership:** Chaired the UK DRI ECR Informatics Committee.
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Skills

Programming & Tools: R, Bash, SQL, Git, Nextflow, Docker/Singularity, SLURM, Quarto/RMarkdown, Snakemake (basic), Python (basic)

Data Analysis: Genomics, Proteomics, Electronic Health Records, Bayesian/Frequentist Statistics, Differential Expression, Data Visualisation

Workflows & Reproducibility: GitHub/GitLab, Containerisation, HPC job scheduling,

Workflow automation, FAIR data practices

testd **Communication & Teaching:** R training for MSc students, workshop delivery, cross-disciplinary collaboration

Languages: English (native), Portuguese (intermediate), Greek (beginner)

Education

PhD in Biomedical Engineering — Keele University, UK (2018–2021)

Focus: Prognostic modelling in spinal cord injury using omics and EHR data.

BSc (Hons) Biological Sciences — Lancaster University, UK (2013–2016)

Awards & Fellowships

- DPMCN ECR TADA Travel Grant – £750 (2025)
 - Associate Fellowship – Advance HE (2024)
 - Winning Team – DEMON Network NeuroHack (2022)
 - Winning Team – Race Against Dementia Accelerator (2021)
 - EPSRC CDT Grant – £5000 (2021)
 - Duke of Edinburgh Silver Award (2010)
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Selected Publications

- Bernardo Harrington, G. M. et al. (2024). *A Comprehensive Proteomic and Bioinformatic Analysis of Human Spinal Cord Injury Plasma Identifies Proteins Associated with the Complement Cascade and Liver Function as Potential Prognostic Indicators of Neurological Outcome.* [Journal of Neurotrauma](#)
 - Bernardo Harrington, G. M. et al. (In prep). *Paired Vascular-Parenchymal Single Nuclei Sequencing Reveals Perturbed Endothelial-to-Mesenchymal Transition in Alzheimer's Disease.*
 - Full list: [ORCID Profile](#)
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Outreach & Teaching

- Lecturer for MSc Bioinformatics students (R programming, stats, reproducibility)
- Trainer at EMBL course on dementia research
- Hosted livestream fundraiser for ARUK (~10K views)
- Speaker at international and UK-based research conferences