



Mark V. Murphy

Data Analyst

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About me

I have >10 years experience in processing, analysing, and communicating data, gained from education, employment, PhD research, and self-directed projects and training. I have a background in science (ecology), but with increasing interest and expertise in statistics, programming (R), and data science in recent years. I also have developing interests in AI, health, and finance (esp. cryptocurrencies), and in the role of technology in driving rapid societal change. I have a lifelong commitment to learning and development, and generally strive for high quality in everything I do. I am currently looking to apply my skills and experience to new challenges and a new role — ideally involving meaningful and impactful data-driven projects, products, and services. For further details on my previous experience, skills and outputs, see my longer-form (academic) CV.

Skills

Existing:

- Data Collection and Management (spreadsheets/CSVs, messy data, etc.)
- Analysis and Modelling (regression, GLM(M)s, SEMs, validation, etc.)
- Visualisation and Plotting (e.g. ggplot2)
- Programming (R — functions, methods, iteration, parallelisation, etc.)
- Package Development and Version Control (R, Git/GitHub)
- Code Documentation and Vignettes (R Markdown, Roxygen2)
- Writing and Editing (reports, theses, publications)
- Communication (presentations, media, outreach)
- Teamwork (fieldwork, group projects, workshops, collaborations)

Learning:

- Machine Learning
- Web/Document Styling (CSS, html)
- Dashboards/Web Apps (Shiny)
- Programming (Python, Julia, SQL)

Projects

- This CV (2021—): compiled using R Markdown, YAML, Pandoc, and LaTeX.
- Forked R package rscodeio (2021—): extends RStudio VS Code dark theme to menus and other IDE elements, R Markdown documents, pkgdown websites. Experimental.
- R package dissCqN (2021—): calculate compositional dissimilarity for species assemblages or interaction networks. v0.1.0. CRAN submission pending.
- R package semEff (2019—): calculate effects and confidence intervals for structural equation models (SEM). v0.5.0. CRAN downloads >15K (~2K/month). New release pending (v0.6.0).
- Bioinformatics (2019—): editing and submission of hundreds of digital DNA sequences and metadata to the Barcode of Life Data System. Published subset here; more pending research publications.
- Research (2018—): contributing statistical, editing, and domain expertise to ecological research projects (University of Western Australia, University of Leeds; publications to follow).

Experience

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|---------|--|------------------|
| 2018—21 | Writing, Programming, Projects, Retraining, (incl. breaks) | UK |
| | Self-Directed | |
| 2016—18 | Research Assistant (Data Analysis, Bioinformatics) | Perth, Australia |
| | University of Western Australia | |
| 2016—16 | Lab Demonstrator (Student Assistance, Supervision) | Perth, Australia |
| | University of Western Australia | |
| 2011—11 | Research Assistant (GIS, Entomology) | Perth, Australia |
| | University of Western Australia | |

Education

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|---------|-------------------------------------|------------------|
| 2012—16 | PhD (Ecology) | Perth, Australia |
| | The University of Western Australia | |
| 2007—08 | MSc (Biodiversity and Conservation) | Dublin, Ireland |
| | Trinity College Dublin | |
| 2001—05 | BA (Zoology) | Dublin, Ireland |
| | Trinity College Dublin | |