



Mark V. Murphy

Data Analyst

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About me

I have >10 years experience in processing, analysing, and communicating data. My experience has been gained from education, employment, PhD research, and self-driven projects and training. I have a background in ecology and conservation, but with increasing interest and expertise in statistics, programming, and data science in recent years. I also have developing interests in the areas of AI, health, and finance (esp. cryptocurrencies), and in the role of technology in driving rapid societal change. I am currently looking to apply my skills and experience to a new role, and ideally to meaningful data-driven projects and services with wider societal benefits. Further details on my previous experience, skills and outputs are in my extended (academic) CV.

Skills

Existing:

- Data Collection and Management (spreadsheets, CSVs)
- Analysis and Modelling (regression, GLMs, mixed models, SEMs, etc.)
- Visualisation and Plotting (e.g. ggplot2)
- Programming (R — functions, methods, iteration, parallelisation, etc.)
- Code Documentation and Vignettes (rmarkdown, roxygen2)
- Package Development and Version Control (R, Git/GitHub)
- GIS, Digital Mapping, and Spatial Analysis (QGIS, ArcGIS, R)
- Writing and Editing (reports, theses, publications)
- Communication (seminars, workshops, media, teamwork, supervision)

Learning:

- Machine Learning
- Web/Document Styling (CSS, html)
- Dashboards (e.g. shiny)
- Programming (Python, Julia, SQL)

Projects

- This CV (2021—): compiled using rmarkdown, pandoc, and LaTeX.
- Fork of R package `rscodeio` (2021—): extends RStudio VS Code dark theme to options menu and other elements, rmarkdown documents, pkg-down websites. Experimental.
- R package `dissCqN` (2021—): calculate C_{qN} compositional dissimilarity for biotic assemblages or interaction networks. v0.1.0. CRAN submission pending.
- R package `semEff` (2019—): calculate effects and confidence intervals for ‘piecewise’ 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 Database. Published subset [here](#).
- Research (2018—): contributing statistical, programming, and other expertise to collaborative ecological research projects (University of Western Australia, University of Leeds; publications to follow).

Experience

2018—21	Projects, Retraining, Career Change (incl. health breaks) Self-Driven	UK
2016—18	Research Assistant (Data Analysis, Bioinformatics) University of Western Australia	Perth, Australia
2012—16	PhD (Ecology) University of Western Australia	Perth, Australia
2011—11	Research Assistant (GIS, Insect Taxonomy) University of Western Australia	Perth, Australia

Education

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