



# 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, Tableau)
- Programming (Python, Julia, SQL)

## Projects

- This CV (2021—): compiled using R Markdown, YAML, Pandoc, and LaTeX.
- Forked R package rcodeio (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.
- R package semEff (2019—): calculate effects and confidence intervals for structural equation models (SEM). v0.6.0. CRAN downloads: 19K.
- 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, Career Change (incl. breaks) UK<br>Self-Directed |   |
| 2016—18 | Research Assistant (Data Analysis, Bioinformatics)                               | Perth, Australia<br>University of Western Australia |
| 2016—16 | Lab Demonstrator (Student Assistance, Supervision)                               | Perth, Australia<br>University of Western Australia |
| 2011—11 | Research Assistant (GIS, Entomology)   | Perth, Australia<br>University of Western Australia |

## Education

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