

CV | Resume

Charles T. Gray, PhD

Senior Data Strategist | Infrastructure Consultant | [FAIR](#) Data Advocate | Data Storyteller

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[LinkedIn](#) | [GitHub](#) | [Website](#) | [Publications](#) | [Coding Portfolio](#) | [Bio](#)



Professional Summary

Senior data strategist and research infrastructure expert with 15+ years' experience spanning statistical computing, open science, and enterprise analytics. I design **reproducible, testable, and reusable data systems** and build **visualisations that communicate clearly and inspire trust**. My approach always accounts for the **organisational change** required to support automation at scale. Whether advocating for FAIR principles or replacing tangled spreadsheets with semantic models and observability, I focus on delivering **long-term value — not hype**. I'm seeking roles that recognise **data architecture as strategy**, not as a solo heroic effort.

Career Highlights

- **Heidelberg Laureate Forum Featured Scientist** — selected for combining mathematics, music, and storytelling at one of the world's most prestigious scientific gatherings.
- **Keynote Speaker** — World Science Festival, Code Like a Girl, Melbourne Writers Festival, and the Australian Mathematical Sciences Institute *Choose Maths* Campaign — [watch "The Harmony of Maths"](#). Known for translating technical concepts with clarity, comedy, and creativity.
- **Sole Architect of Full Data Stack** — Designed and maintained a full DBT–SQL–Python–Tableau stack for a mobile game studio, including semantic marts, telemetry pipelines, and custom observability macros.
- **Led ESG Data Strategy** — Proposed and delivered FAIR-aligned infrastructure in an enterprise setting to support sustainability reporting and governance.

- **Pioneered Simulation Pipelines** — Created open-source tooling for robust statistical inference, now [widely cited](#) across metascience and reproducibility communities.
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Professional Experience

Senior Data, Infrastructure, & Analytics Consultant *Freelance / Contract Roles — 2019–Present*

- Delivered end-to-end **data architecture solutions** using DBT, Dagster, Redshift, Snowflake, PowerBI, Tableau, R, and Python — from ingestion to semantic layers.
- Championed **governance-first systems**: versioned pipelines, automated testing, and CI/CD practices across the analytics lifecycle.
- Took on **product ownership** where needed — scoped requirements, aligned delivery with business priorities, and managed cross-team expectations.
- Led complex projects in **ESG and enterprise analytics**, often driving **org-wide alignment** as part of delivery.
- Provided strategic input on **open science infrastructure**: reproducibility standards, FAIR workflows, and sustainable tooling for research organisations.

Research Software Engineer & Lecturer *University & Research Institutions — 2012–2019*

- Developed and maintained **Bayesian modelling pipelines** for evidence synthesis and statistical meta-analysis.
 - Designed and taught curricula in **statistical computing, algorithms, visualisation, and simulation techniques**.
 - Built modular, testable **simulation frameworks** for evaluating estimator performance under uncertainty.
 - Advocated reproducible practices and toolchains in collaborative, interdisciplinary scientific environments.
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Selected Speaking & Community Leadership

- **Invited Speaker** — DBT Meetup Copenhagen, PyData Copenhagen, useR Group, and many more over 10+ years
 - **Mentor, Organiser, Advocate** — Code Like a Girl, R-Ladies Global, Women in Data & Analytics Nordics
 - **Featured In** — *Womanthology* magazine, AMSI *Choose Maths* campaign
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Skills

Infrastructure & Engineering: DBT, Dagster, SQL, Redshift, Snowflake, Azure, Python, R, Dot, Shell, Linux

I change data science languages and tools like clothes

Data Strategy & Governance: Semantic modelling, observability, testing, documentation workflows

Collaboration & Delivery: Git, Jira, Monday, ClickUp, Agile, technical product management using dashboards, automations, epic-level reporting, and graph-oriented project planning

Reproducibility & Open Science: R Markdown, Quarto, Targets, FAIR workflows, Github pages websites using (pkgdown, Quarto, & Jupyter)

Communication: Data storytelling, technical writing, cross-team leadership

Prompt Engineering: Daily use of Claude and Copilot to accelerate dev workflows, unblock busywork, and prototype infrastructure — and yes, I absolutely used a CV GPT to help edit this to target data strategy and storytelling roles

Education

Ph.D., Reproducible Analytics Engineering (awarded by the [Department of Statistics](#)) — La Trobe University, Australia (2015–2020)

Research focus: Engineered large-scale simulation pipelines for estimator evaluation in metascience. Developed reproducible, testable, and extensible statistical software — now [widely cited](#) across open science communities.

B.Sc. (First Class Hons), Mathematics & Statistics — La Trobe University (2011–2015)

Dissertation topic (published in full): Theorem in quasi-primal algebras and homomorphism partial orders

B.A./B.Mus., Cinema Studies & Musicology — University of Melbourne (2001–2007)

Dissertation topic: Postcolonialism and exoticism in the music of Disney animated feature films

Approach to Data Leadership

I believe data architecture is inherently **collaborative, strategic, and cultural**. Pipelines are only as valuable as the understanding, testing, and documentation behind them. I thrive in teams that treat **infrastructure as a long-term investment**, not a last-minute patch.