

MAX CAMPBELL

- Worked for six years in the field of data science in research and industry settings
- Have published eight scientific publications - one as the lead author
- Strong R programmer (>5 years experience) with skills in MATLAB, Python and SQL
- Proficient at data management, data wrangling and data visualisation
- Skilled modeller with experience applying ML algorithms, frequentist statistics, bayesian statistics, dynamical systems, probabilistic processes, and graph theory

EDUCATION

2019-2020 **Bachelor of Science (Mathematics)**, WAM of 71.27%, University of New South Wales.

2018 **Bachelor of Science (Honours Class 1)**, GPA of 6.875 out of 7, University of Queensland

Supervisors: Prof. Anthony Richardson and Prof. David Schoeman

Tested three global ecological hypotheses using a large zooplankton dataset (141,000 samples). Used regression models (GLMMs) to investigate statistical relationships. Led to the publication of Campbell et al. (2021).

2014-2017 **Bachelor of Marine Science (Ecology)**, GPA of 6.667 out of 7, Awarded with distinction, Griffith University.

EXPERIENCE

Oct 2022-May 2023 **Senior Data Scientist**, Earth Security - (Full-time, London)

- Led quantitative research which supported the delivery of two major projects at Earth Security
- Used R to robustly and efficiently undertake quantitative analyses, GIS and generate automated reports
- Reviewed several thousand lines of code, detecting and resolving several major bugs, which dramatically changed the results of a major report that was subsequently published
- Taught a coworker to use R and GitHub, which improved the quantitative capacity at Earth Security
- Hosted a well-attended biweekly hacky hour to help familiarise team members with the capabilities of data science to enhance projects. This led to several collaborations within projects
- Provided advice to management on quantitative strategy and direction
- Developed a robust collaborative system for quantitative work and deployed it throughout the organisation, including implementing the first version control with git and code management with GitHub within Earth Security

Jun 2017-April 2022 **Research Assistant (Modelling)**, Griffith University - (Full-time/Casual, Gold Coast)

Supervisors: Assoc. Prof. Chris Brown and Prof. Rod Connolly

- Published eight [scientific articles](#) - one as lead author, with another three currently in review. These publications advanced the scientific understanding of concepts of connectivity, resilience, spatial patterns and multiple stressors in ecological systems, and used quantitative tools from graph theory, dynamical systems and stochastic modelling
- Published seven peer-reviewed statistical analyses (GLMMs, GAMMs, multivariate bayesian models, clustering, PCAs) with openly shared code
- Used the R programming language to solve problems, build pipelines, construct models, make visualisations and improve workflows daily
- Engaged with internal and external stakeholders including government officials, managers, PhD students, academics and industry scientists, which led to several project collaborations and scientific publications
- Developed and deployed a [collaboration framework](#) for usage in a quantitative science group with >10 members using a combination of git, GitHub and cloud storage
- Taught mathematics, statistics and R programming to members of the team, and ran a hacky hour
- Workshop tutoring in two undergraduate courses: Marine Ecosystem Modelling (third-year course, 2021) and Statistics (first-year course, 2017)

TECHNICAL SKILLS

Technologies - Linux, Windows, Mac OS, R ([showcased here](#)), Python, MATLAB, SQL, Microsoft office, LaTeX, markdown (e.g. this CV), SPSS, Rstudio, JupyterLab, git and [GitHub](#)

- Experienced working with various statistical and mathematical models: Linear (mixed) models ([Molinari et al. 2021](#)), logistic regression, GLMMs ([Campbell et al. 2021](#), [Molinari et al. 2021](#)), GAMMs ([Brown et al. 2020](#), [Brown et al. 2023](#)), PCAs ([Voser et al. 2022](#)), clustering algorithms ([Voser et al. 2022](#)), time-series and spatial models ([Campbell et al. 2021](#), [Brown et al. 2023](#), [Glen et al. in Review](#)), bayesian regression ([Brown et al. 2021](#)), Lotka Volterra (ODEs) ([Turschwell et al. 2022](#), [Brown et al. in Prep.](#)), graph theory ([Brown et al. in Prep.](#)) and stochastic models ([Brown et al. in Prep.](#))
- Knowledgeable about experimental design, exploratory data analyses, model training, model selection, model validation, hypothesis testing, forecasting and statistical inference
- Strong programming skills including functional programming, object-oriented programming, metaprogramming, vectorisation, parallel processing, data processing, statistical modelling, visualisation, dashboards and apps, data management skills ([Github collaboration framework](#)), and cloud computing

PROFESSIONAL SKILLS

Problem solving skills

- Excellent research skills and experience working with complex systems (honours, research assistant)
- Ability to understand systems holistically (concept maps, analyse relationships, identify root causes)
- Provide creative solutions (e.g. help on complex mathematics: [King et al. 2022](#), [Turschwell et al. 2022](#))

Excellent interpersonal skills

- Demonstrated effective communication skills in a range of work, cultural and social contexts, and adaptable to different situations (office and remote work, travel, and involvement in underwater hockey)
- Practised in stakeholder engagement through role at Earth Security (industry), within [GLOW team](#) (academic), and with 34 coauthors on my first author paper ([Campbell et al. 2021](#))

Leadership skills

- Supervised and managed team research projects (data science projects at Earth Security, honours)
- Adaptable to different roles in a team: supporting and following (RA for Chris Brown, Global Wetlands Project), or leading (data scientist at Earth Security, head tour guide, underwater hockey roles: founder, captain, manager, president)

AWARDS

- 2021 Pro Vice Chancellor Research Excellence Team Award (Griffith University)
- 2021 Australian Underwater Federation Queensland Sports person of the Year
- 2018 Dean's Commendation for Academic Excellence (University of Queensland)
- 2017 Bachelor of Marine Science (Gold Coast) Final Year Award – Highest achieving student in cohort
- 2017 Griffith Honours College Scholar
- 2015 Team Leader Award (A Team Tuition) – Awarded for great leadership and strong results
- 2014 & 2015 Griffith Award for Academic Excellence

ADDITIONAL

- Underwater Hockey - Queensland State Team five times, 2020 Australian Team, UK A Division
- Founded and managed a successful Underwater Hockey Club for five years
- **Hiked** - Huayna Potosi (6088m), Hinchinbrook Island (32km), Lara Pinta (230km), South Coast Track (84km), Carnarvon Gorge (87km), **Ran** - Gold Coast Marathon, GRUNT Half Marathon
- Club member - Golden Key International Honour Society, Griffith Marlins Hockey Club, Tweed Gold Coast Freedivers, Griffith Honours College, West Wickham Underwater Hockey