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MAX CAMPBELL /

GOALS

1. To find a position which allows me to pursue my interest for problem solving in complex systems using data science, mathematics and statistical modelling.
2. To continue to expand my knowledge base and further develop my professional skills.
3. To actively contribute to solving important real-world problems with quantitative tools.

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). Frequentist regression models (GLMM) were used to investigate statistical relationships (Campbell et al. 2021).

2014-2017 **Bachelor of Marine Science (Ecology)**, GPA of 6.625 out of 7, Awarded with distinction, Griffith University.

2012-2013 **Diploma of Science** (articulated into Bachelor of Marine Science), GPA of 5.00 out of 7, JCU.

EXPERIENCE

May 2021-Current **Research Assistant (Ecosystem Modelling)** supervised by Assoc. Prof. Chris Brown, Griffith University - (Full-time)

- Researching connectivity, resilience and multistressors in complex networks
- Using graph theory, dynamical systems, probability and stochastic modelling, bayesian regression and frequentist regression techniques.
- Advanced R (functional programming, metaprogramming, data wrangling & visualisation, shiny apps)
- Collaborating with various postdocs, PhD students and ecologists
- Developing a collaboration framework using GitHub
- Reading scientific literature

Jun 2017-May 2021 **Research Assistant Positions** for Assoc. Prof. Chris Brown and Prof. Rod Connolly, Griffith University - (Casual)

- Spatio-temporal, multivariate, additive and linear statistical modelling using R
- Researched resilience in complex networks using graph theory, dynamical systems and probability
- Complex matching and manipulation of sensitive datasets and data visualisation using R
- Collected and interpreted information from thousands scientific journal articles
- Worked at different capacities (5-40hrs per week), in a team environment and remotely from Sydney

July 2017-Jun 2021 **Workshop Tutor**, Griffith University - (Sessional)

- Marine Ecosystem Modelling (third year course, 2021): Mathematical models (logistic growth, Lotka-Voltera models, ODEs, etc.), R coding
- Statistics (first year course, 2017): Statistical concepts, SPSS, supervised exams, marking

Jan 2017-June 2017 **Head Tour Guide**, Australian Kayaking Adventures - (Contractor)

- Communicated effectively and discussed wildlife with a vast range of social groups
- Directed other tour guides and worked as a team

Apr 2015-Jan 2016 **Tutor**, A Team Tuition - (Casual)

- Tutored university students and secondary school students
- Built client and student rapport

Mar 2015-June 2015 **Laboratory Demonstrator**, Science On the GO, Griffith University - (Casual)

- Helped high school students with laboratory work

Mar 2015-Dec 2015 **Student Mentor**, Griffith University - (Volunteer)

- Organised social events and helped first year students succeed at university

WORK SKILLS

- Strong problem solving skills and ability to be creative
- Excellent research skills and very capable learner
- Proficient with R (advanced courses completed), Excel, Microsoft office, LaTeX, RMarkdown, SPSS, git, GitHub and previous experience with MATLAB, Python3
- Data manipulation and processing (base R, tidyverse, numpy)
- Functional programming and metaprogramming
- Applications (R Shiny)
- Data visualisation (R base plot, ggplot2, plotly, matlibplot)
- Broad range of mathematical tools (linear algebra, multivariable calculus, ODEs, probability)
- Experience working with complex systems (worked as a marine ecologist)
- Statistical modelling (linear models, GLMMs, GAMs, PCAs, cluster analysis, model selection, residual analysis, experimental design, bayesian regression)
- Experienced working with large datasets, and satellite data
- Cloud computing (Griffith HPC), parallel processing
- Linux (current machine), Mac OS and Windows

PERSONAL SKILLS

Excellent interpersonal skills

- Demonstrated effective communication skills in a range of work, cultural and social contexts, and adaptable to different situations
- Enjoy working with others and as part of a team
- Ability to establish rapport, listen carefully, negotiate tactfully and build relationships
- Comfortable at speaking in front of groups, and to a diverse range of people

Leadership skills

- Held leadership positions in various sporting clubs (including founder, captain, manager, president, vice president and executive committee member)
- Supervised and managed team research projects
- Accountable for actions of team, and able to identify the needs of others
- Established a new underwater hockey club at Griffith University
- Adaptable to different roles in a team (can support, follow or lead)

Strong work ethic

- Persistent and resilient under harsh conditions (honours project, Australian level sport)
- Capacity to self-manage and work independently (remote work during UNSW study and COVID-19)
- Confident when undertaking tasks and seeking help when necessary
- Continuously studying and training my mathematics and coding

AWARDS

- 2021 Pro Vice Chancellor Research Excellence Team Award (Griffith University)
- 2018 Dean's Commendation for Academic Excellence (UQ)
- 2017 Bachelor of Marine Science (Gold Coast) Final Year Award – Highest achieving student in cohort
- 2017 Griffith Honours College Scholar
- 2014/15 Griffith Award for Academic Excellence

MEMBERSHIPS

- 2017-21 Golden Key International Honour Society
- 2017-21 Griffith University Underwater Hockey Club (founder, president)
- 2015-21 Tweed Gold Coast Freedivers (vice president, committee member)
- 2015-17 Griffith Honours College (alumni)

PUBLICATIONS

- Voser, T.M., **Campbell, M.D.**, & Carroll, A.R. (2022). How different are marine microbial natural products compared to their terrestrial counterparts? Natural Product Reports.
- Brown, C.J., Desbiens, A., **Campbell, M.D.**, Game, E.T., Gilman, E., Hamilton, R.J., Heberer, C., Itano, D. & Pollock, K. (2021). Electronic monitoring for improved accountability in western Pacific tuna longline fisheries. Marine Policy.
- Brown, C.J., Mellin, C., Edgar, G.J., **Campbell, M.D.** & Stuart-Smith, R.D. (2020). Direct and indirect effects of heatwaves on a coral reef fishery. Global Change Biology.
- **Campbell, M.D.**, et al. (2021). Testing Bergmann's rule in marine copepods. Ecography.
- Molinari, B., Stewart-Koster, B., Adame, M.F., **Campbell, M.D.**, McGregor, G., Schulz, C., Malthus, T.J. & Bunn, S. (2021). Relationships between algal primary productivity and environmental variables in tropical floodplain wetlands. Inland Waters.

CONFERENCES & WORKSHOPS

- Environmental modelling for better predictions and decisions ACEMS symposium in Brisbane (2021)
- Virtual International Statistical Ecology Conference (2020)
- Intermediate R Workshop (2018), and Advanced R Workshop in Brisbane (2019/2020)
- D61+ LIVE in Brisbane (2018)
- Workshop on Metrics of Climate Change in Marine Systems on Fraser Island (2018)
- Global Alliance of Continuous Plankton Recording Surveys (GACS) workshop in Plymouth, UK (2017)
- Workshop on Applications in Natural Resource Mathematics in Brisbane (2017)

REFEREES

Assoc. Prof. Chris Brown (supervisor)
Research Leader - Global Wetlands Project
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Prof. Anthony Richardson (honours supervisor)
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