Email: maxcampbe@gmail.com

MAX CAMPBELL /

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 6.667 out of 7, Awarded with distinction, Griffith University.

EXPERIENCE

Jun 2017-April 2022 **Research Assistant (Ecosystem Modelling) Positions**, Griffith University
Supervisors: Assoc. Prof. Chris Brown and Prof. Rod Connolly

- Read scientific literature and researched connectivity, resilience and multistressors in networks
- Statistical modelling (see *Mathematical and Statistical Skills*)
- Applied graph theory, dynamical systems, stochastic modelling
- Advanced R (functional programming, metaprogramming, data wrangling & visualisation, shiny apps)
- Collaborated with various PhD students, postdocs and ecologists
- Developed a collaboration framework using GitHub
- Worked at different capacities (5-40hrs per week, incl. 2 years full-time), in a team environment and remotely from Sydney

July 2017-Jun 2021 **Workshop Tutor**, Griffith University

- 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

Apr 2015-Jan 2016 **Tutor**, A Team Tuition

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

Mar 2015-Dec 2015 **Student Mentor**, Griffith University

MATHEMATICS AND STATISTICS SKILLS

- 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), PCAs (Voser et al. 2022), clustering algorithms (Voser et al. 2022), time-series and spatial models (Campbell et al. 2021, Brown et al. in Prep., Glen et al. in Review), bayesian regression (Brown et al. 2021), Lotka Voltera (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.)
- Comfortable collaborating with people who varied mathematical knowledge as demonstrated by my publications
- Knowledgeable about experimental design, exploratory data analyses, model selection, model validation, hypothesis testing, forecasting and statistical inference
- Mathematical language as demonstrated in my publications (e.g. Turschwell et al. 2022 supplementary material)

COMPUTING SKILLS

- Technologies: Linux (intermediate), Windows (advanced), Mac OS (advanced), R (advanced), Python (basic), MATLAB (basic), SQL (basic), Microsoft excel and office (advanced), LaTeX (basic), RMarkdown (advanced, e.g. my CV), SPSS (strong), git (intermediate) and GitHub (intermediate)
- Skills: Functional programming (advanced), OOP (limited), metaprogramming (intermediate), vectorisation (advanced), parallel processing (intermediate), data processing (advanced), statistical modelling (advanced), data structures (advanced), visualisation (advanced), dashboards and apps (basic), data management skills (strong, Github collaboration framework), cloud computing (basic)
- Packages: base R, tidyr, dplyr, shiny, purrr, numpy, mgcv, nlme, lme4, ggplot2, matplotlib, brms, lubridate, glmmTMB, rlang, parallel, etc.

AWARDS

- 2021 Pro Vice Chancellor Research Excellence Team Award (Griffith University)
- 2021 Australian Underwater Federation Queensland Sportsperson 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

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 collaborating with The Nature Conservancy (industry), GLOW team (academic), and with 34 coauthors on my first author paper (Campbell et al. 2021)

Leadership skills
- Supervised and managed team research projects (honours, collaboration framework)
- Adaptable to different roles in a team: supporting and following (RA for Chris Brown, Global Wetlands Project), or leading (head tour guide, underwater hockey roles: founder, captain, manager, president)

ADDITIONAL

- Seven scientific publications, one as lead author, with an extra three in review
- State underwater hockey team five times (once as captain), 2020 Australian Underwater Hockey Team
- Founded and managed a successful underwater hockey club
- **Hiked -** Huayna Potosi (6088m), Hinchinbrook Island (32km), Lara Pinta (230km), South Coast Track (84km), Carnarvon Gorge (87km), **Ran -** Gold Coast Marathon, GRUNT Half Marathon (3rd place)
- Club member - Golden Key International Honour Society, Griffith Marlins Hockey Club (founder, president), Tweed Gold Coast Freedivers (vice president, committee member), Griffith Honours College

Referees available upon request