

*Alexander Blake*

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**About me:** Data scientist & consultant for multinational & nonprofit clients in agriculture and the environment. Biology PhD using years of experience in hypothesis testing and modeling to pull cool stories from messy data.

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## SKILLS & TOOLS

Communicating, Visuals, R, SQL, Python, Data scraping/cleaning, Spatial, Timeseries, Hypothesis testing, Bayesian, ML

## WORK EXPERIENCE

### Jr. Data Scientist, Ecodata Technology

Jan 2023 – present

*Helping clients in agriculture & the environment achieve their business goals with messy data.*

- Enriched spatial timeseries with scraped climate data to show unexpected benefit of agroforestry for disease control.
- Identified guidelines for optimal pest control in both national forest management and pesticide product development.
- Simulation-based power analysis with GLMMs for a 10-fold saving in sample requirements & costs for product testing.
- Promotional web content development including data animations and an R Shiny dashboard hosted with AWS.

### Applied Scientist, SA Department of Environment and Water

Jul 2021 – Dec 2021

*Optimizing wetland conservation with limited funds and manpower.*

- Narrowed management effort to 4 (of 30+) sites requiring urgent intervention for turtle conservation.
- Developed wildlife-recognition app for trail-cam photos, boosting data processing capacity 1000%.

### Data Analyst, SA Department of Environment and Water

Apr 2021 – Jul 2021

*Modernized data workflows to relieve pressure on an under-resourced department.*

- Collaborated between departments to develop cost-free solution for routine bulk data archiving on SharePoint. Automated using PowerShell, eliminating clerical work equivalent to approx. 6% of team payroll expenses.
- Automated client record reconciliation for annual reporting, reducing a month-long task to under 1 hour.

### Data Consultant, Newton Launch Systems

Sep 2016 – Jan 2018

*Collaborative modelling project to build a new business plan for an aerospace start-up.*

- Developed a market model with finance director, identifying two key market risks requiring a business plan.
- Estimated parameters from a small messy dataset with Bayesian methods, saving £20k on commercial data access.
- Results presented at industry conferences and used to win share of a £500k UK government grant in a consortium.

### Researcher, UN Environment World Conservation Monitoring Centre

Jul 2017 – Nov 2017

*Researched and reported best practice in global conservation and cultural policy.*

- Formulated KPIs with topic expert, distilled hundreds of case studies from grey literature to three digestible clusters.
- Summarized results in a presentation delivered by WCMC staff to the government of Guyana to guide policy reform.
- Contributed to the FAO 2020 State of the World's Forest report.

## EDUCATION, AWARDS, CERTIFICATIONS, PUBLICATIONS

### Monash University & Oxford University, PhD in Biology (Excellence scholarship)

Feb 2018 – Apr 2023

*Investigating indirect effects of climate change on ocean food-webs with modelling and laboratory experiments.*

- Created and ran a 3-year research program on a novel study system with a small budget. Documented new protocols.
- Collaborative publishing and editing experience, experience presenting at professional conferences.

Microsoft, Power BI Data Analyst Associate

Completed Jul 2022

Coursera, Machine Learning by Andrew Ng, Stanford University

Completed Aug 2017

Charles Sturt University, Graduate Diploma of Mathematics (Dean's Award)

Graduated Nov 2016

James Cook University, BSc (First Class Honors, University Medal, Biology prize)

Graduated Nov 2014

*Five scientific publications, details on request.*

## EXTRACURRICULAR

**University Biology Club:** Cofounder and treasurer. Negotiated a 20% member discount with local dive shop.

**Tech enthusiast:** Blockchain and Defi native. Paid off my student loans with investments in emerging tech.

*Travel-bug, weightlifter, and occasional gamemaster for Dungeons and Dragons – it's worse than herding cats.*