

Julia Wood

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I am a behavioural neuroscience PhD candidate, with 7 years of industry research and development experience developing innovative consumer products. I am seeking a data analytics opportunity to further develop my skills and contribute to data-driven solutions.

Technical Skills

Proficient: Novel Product Development

Competent: R, Python, Data Analysis and Visualisation, Mixed-Effects Models, Generalised Linear Models, PsychoPy

Novice: MNE-Python, Data Simulation, Shiny, LaTeX

Data & Programming Projects

Project	Packages	Objective
Power spectral density analysis of electroencephalography (EEG) data in Python	NumPy, pandas, MNE-Python, os, matplotlib	I am investigating changes in the power spectral density of EEG data over time in my PhD studies.
Generalised linear mixed models in R	tidyverse (dplyr, tidyr & ggplot2), lme4, gamlss, broom.mixed	I am using generalised linear mixed models to investigate changes in data from a variety of distributions over time in my PhD studies.
Interactive behavioural tasks in Python	PsychoPy, NumPy, pandas, os	I have coded interactive tasks for behavioural experiments in my PhD studies (associative word learning and sequential finger tapping tasks).
Data simulation study in R	tidyverse (dplyr, tidyr & ggplot2), lme4, gamlss, broom.mixed	I am simulating realistic lognormal experimental data, based on exploratory and descriptive analysis of a public motor-evoked potential (MEP) dataset. I am using these simulated data to compare the ability of various linear models to estimate changes in the within-individual variability of lognormal data over time.
Interactive visualisation of powerlifting data in a shiny (R) web application	shiny, tidyverse (dplyr, tidyr & ggplot2)	I am developing a shiny (R) app to interactively visualise international powerlifting competition results, using data from an open source database.

Education

The University of Queensland, Brisbane

2020–Present

Doctor of Philosophy (Neuroscience)

Title: Sleep, Memory, and Non-invasive Brain Stimulation.

Supervisors: Dr Martin Sale, Dr Nicholas Bland, Dr Sonia Brownsett, Dr Cassandra Pattinson

I am researching how non-invasive brain stimulation influences the quality of our sleep and how we form new memories.

Key skills:

- Designing and conducting human research (e.g., study design, obtaining ethical clearance, recruitment, conducting experiments, analysing and reporting results).

- Teaching myself to write scripts in R and Python to achieve a variety of objectives.
- Managing sensitive data in compliance with ethical and intellectual property requirements.

Outputs:

1. J Wood, N Bland, S Brownsett, M Sale. (2021) *SLEEP Advances*, 2(Abstract Supplement), A74, P163 *Slow wave transcranial electrical stimulation during wake to investigate the consolidation of new learning* [Poster Presentation]. <https://doi.org/10.1093/sleepadvances/zpab014.202>

UK Society of Cosmetic Science, Brisbane (Remote)

2016–2017

Diploma of Cosmetic Science

Distinction

Griffith University, Brisbane

2010–2012

Bachelor of Forensic Science (Chemistry)

GPA: 6.92/7

Achievements:

- Forensic Science Medal. *I was awarded this medal as the highest-achieving graduate in my bachelor's degree in 2012*
- Graduation Ceremony Student Speaker. *I was the sole student selected to write and present a speech on behalf of my cohort at our graduation ceremony*
- Griffith University Honours College Alumni. *I was invited to join this society as one of the top 2 percent of Griffith undergraduates demonstrating leadership and community engagement*
- Golden Key International Honour Society Member. *I was invited to join as one of the top 15 percent of global undergraduates in 2012*

Employment

Research & Development Chemist

Casual **Apr 2020–Current**

Inline Cosmetic Laboratories, Beenleigh, QLD, Australia

Full-time **Jul 2015–Apr 2020**

I develop recipes for novel cosmetic products. I transitioned from full-time to casual employment when I commenced my PhD in April 2020.

Key skills:

- Developing and delivering innovative solutions to customers on-time and within-budget.
- Taking responsibility for projects across their entire lifecycle, from conceptualisation to launch, and continual quality monitoring.
- Independently managing multiple projects with different timelines in a fast-paced and consumer-focussed environment.
- Liaising with key project stakeholders to achieve a common goal, including colleagues, customers, and suppliers.
- Translating technical information to suit a variety of audiences, including sales departments and the general public.
- Preparing documentation for nationally-recognised accreditation bodies, including Australian Certified Organic.
- Mentoring and training junior chemists.
- Trouble-shooting technical issues as they arise.
- Researching relevant national and international legislation to deliver compliant consumer products.
- Technical review of conference presentations.
- Resilient and seeking new challenges.
- Conducting annual performance reviews of current employees and interviewing potential employees.

Achievements:

- MForHer award (2022), Merck Life Sciences. *I recieved this award celebrating women in science after a colleague nominated me for my passion for research.*

Quality ChemistFull-time **Jan 2013–Jun 2015***Alphapharm, Wacol, QLD, Australia*

I performed chemical testing on pharmaceutical product prior to their release for sale.

Key skills:

- Conducting experiments to investigate hypotheses.
- Investigating, documenting and resolving out of specification results.
- Supporting senior staff during regulatory audits (US Federal Drug Administration)

Referees

Available on request.