

Profile

I am a highly motivated, passionate student with a love for machine learning, data and neuroscience. I have a broad foundation across these disciplines complemented by my various specialisations in certain aspects of behavioural neuroscience or machine learning.

Education

UNSW 2022-2026

Advanced Science (Neuroscience major with honours) and Computer Science (AI major)
CSE Dean's list 2022 Summer Vacation Research Scholarship 2023 WAM: 84.7

Experience

UNSW School of Psychology / Behavioural Neuroscience

Behavioural Neuroscience Research Assistant 2023-Current

Independent handling of research including various scripting pipelines, machine learning and data analysis.

- Applied supervised and unsupervised ML methods including classifiers, clustering and pose-estimation.
- Modified existing open-source machine learning methods to tailor to use-case
- Designed a web application for code scanning, tracking, web scraping and registering and use of viruses

Summer Research Scholarship 2023-2024

- Performed whole-brain correlational graph analyses and visualisation including in-silico lesioning and its impact on network communicability
- Applied CNMFe on miniscope fluorescence time-series to identify and calculate individual cell activities, relevant behavioural encoding and correlation of cell encoding population with behavioural metrics

Skills

Python (strong)
Javascript (strong)
Java, C, MIPS

Statistics
Data Analysis
Visualisation
3D Modelling
CAD
3D Printing

Extracurriculars

UNSW Neuroscience Society Executive 2 years

- Worked with faculty, Arc UNSW and fellow executives

UNSW Virtual Reality Society President 3 years

- MegaLAN: UNSW's biggest LAN event (>500 attendees)
- Arc "VIP"

UNSW School of Biomed Sciences Student Rep 2024

- Discussed course structure with head faculty

Projects

Pokérogue (open-source contributions)

- Pokemon fangame with over 1 million users

Virus Registry Web Application

- Registering, tracking, scanning viruses

MRI Viewer and Annotation Web Application

Markov Network for Office Occupancy

Whole-brain single-cell network analysis

Pose-estimation and behaviour clustering in rodents

Miniscope CNMFe and cell encoding analysis