

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

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

Skills

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

Statistics
Data Analysis
Visualisation
3D Modelling
CAD
3D Printing

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