

EDUCATION

MBioChem Biochemistry (Molecular and Cellular), University of Oxford, Oriel College **2022 – 2026**

- Grade: 2:1 in 3rd year Finals (equivalent to a 3.7GPA)
- Supplementary subject: Aromatic and heterocyclic synthesis

Radley College (Honorary academic scholarship); **2017 – 2022**

- A Levels: Mathematics A*, Further Mathematics A*, Chemistry A*, Biology A*
- GCSEs: 11A*, 2A

RESEARCH EXPERIENCE

Research intern, Shi Lab, Ludwig Institute of Cancer Research **Nov 2024 - present**

- Independently identifies a 4 gene signature that predicts MDS transformation to post-MDS secondary AML at high accuracy (currently validating using a second dataset) using WGCNA, mediation, and elastic nets.
- Bioinformatics using R to analyse public omics-datasets to identify lineage-specific vulnerabilities in acute myeloid leukemia (AML)
- Designing and performing EC50 experiments to test drug synergy for targeting AML
- Developing a pan-cancer drug synergy prediction database with a senior postdoc

Model Department Intern, Biomap **Jul 2024 – Aug 2024**

Performed data analysis on comparing protein structure prediction model performances.

- Trained a Torch-ANI model to perform machine learning force field (MLFF) calculations using atomic number and spatial cartesian coordinates as inputs.

Research intern, Hongkui Deng Lab, Peking University **Jul 2023 – Aug 2023**

- Induced hADSCs into hCiPSCs using the lab's small-molecule protocol (Cell, 2023).
- Analyzed oxygen's role in reprogramming metabolism, confirming oxidative phosphorylation as the main energy source.
- Performed Western blotting, RT-PCR, and cell passaging.

Research intern, Qinghua Liu Lab, National Institute of Biological Sciences, Beijing **Jul 2021 – Aug 2021**

- Assisted in studying the effect of calcineurin on NREM sleep phenotypes in mice.
- Supported experiments through reagent prep, lab note-taking, pipetting, and centrifugation.

Intern, China Development and Research Foundation **Jul 2020 – Aug 2020**

- Researched the impact of school meals on child development and wrote outreach summaries for social media.
- Managed a ¥50,000 budget to procure sports/playground equipment for rural Qinghai schools.

INDEPENDENT PROJECTS

Pikkr – iOS App for Reducing Decision Fatigue (*Solo Developer*)

- Designed and launched a decision-making app on the App Store aimed at minimising decision fatigue through probabilistic card-based selections.
- Currently implementing a multi-armed bandit algorithm to personalise decision-making based on evolving user preferences.

3D Mind Map Tool for Thought Visualization (*Independent Project*)

- Developing an interactive 3D tool to spatially represent and connect ideas in a way that mimics the associative structure of human thought.
- Long-term vision includes adapting the system for VR-based cognitive navigation and thought mapping.

EEG/ECG Emotion Prediction Benchmarking (*Computational Neuroscience Independent Project*)

- Building machine learning models to predict emotional states using EEG, ECG, and multimodal signals from the **DREAMER** dataset (DEAP integration in progress).
- Evaluating model generalizability across **sample-dependent**, **sample-independent**, and **few-shot learning** paradigms.

SKILLS AND INTERESTS

Skills: Machine learning with Python, Data analysis using Python and R, Flutter, app development

Languages: English (native); Mandarin (native); French & Spanish & Latin (9 in GCSE)

Co-curricular Activities: Member of Oriel College Boat Club first boat for two years with 20 hours + weekly commitment; 3/78 in Torpids (Oxford's inter-college race) 2023, 1st place in Bedford Head 2023, 3rd place in National School Regatta's 15B category 2018; finished a solo 100km charity ergo under 9 hours.

Interests: Rowing, basketball, tennis, violin, photography, **Clash royale (15,000 + trophies)**

Societies: Oxford neuroscience society (Cortex club) co-president (2025-2026), Oxford Union, Physics Society, SynBio Society, Oxford society of ageing and longevity