

DHRUV SHARMA

+61 466 073 466 | meetdhruv.23@gmail.com | linkedin.com/in/ds23med | github.com/ds23code

EDUCATION

University of New South Wales

Bachelor of Engineering (Bioinformatics) Honours & Master of Engineering (Biomedical)

Sydney, Australia

Jan 2023 – Dec 2027

- **WAM: 74** | **Relevant Coursework:** Bioinformatics, Machine Learning, Computational Biology, Software Design, Statistics

TECHNICAL PROJECTS

JAIME | Accessible AI Education Platform

Sept 2025 – Oct 2025

Python, Twilio API, Flask | 1st Prize – UNSW Societal Impact of AI Symposium

- Built phone-based AI tutor compatible with basic feature phones (Nokia 3310) using Twilio for voice interaction
- Designed voice-driven Q&A system prototype for low-connectivity environments; tested with 12 users
- Pitched deployment model targeting 50,000+ students in rural India and Kenya; won 1st place among 20 teams

ROOTS AI | Genetic Risk Assessment Tool

July 2025 – Aug 2025

Python, Streamlit, OpenAI API, Matplotlib | Supervised by Prof. Andreas Zankl, USYD

- Developed web platform for genetic counsellors to visualise family medical history and identify hereditary disease patterns
- Integrated Mondo Disease Ontology for standardised classification; used OpenAI API to extract structured entities from free-text family histories
- Built automated pedigree chart generation and risk summary reports; reduced manual data entry time by approximately 60%

NeuroHawk | Emergency Detection Helmet

Feb 2025 – May 2025

C++, Arduino | UNSW Buildathon

- Built wearable prototype with Arduino Uno, MPU-6050 accelerometer, and GSM module for impact detection
- Implemented threshold-based algorithm (>3g acceleration) to trigger SMS alerts with GPS coordinates within 5 seconds
- Tested across 15 controlled drop and impact scenarios; successfully triggered alerts in all tests

Poseidon | Water Quality Monitoring Boat

June 2024 – Aug 2024

Python, LoRaWAN, Raspberry Pi, SolidWorks | 3rd Place & People's Choice – UNSW Buildathon

- Led 6-person team to design and build autonomous boat; used SolidWorks to model hull and generate laser-cut components
- Integrated pH, turbidity, temperature, and dissolved oxygen sensors; collected 1,000+ datapoints across Sydney waterways
- Implemented LoRaWAN communication for 2km range with real-time data visualization dashboard

EXPERIENCE

Academic Tutor

Aug 2023 – Present

Tutero & Matrix Education

Sydney, Australia

- Tutor 100+ Year 7–12 students individually and in small-group classes across mathematics and science subjects
- Design and deliver 300+ customised lessons for selective school exam prep and HSC subjects
- Students improved by average of 30% on practice exams after 10+ sessions; maintain 96% satisfaction rating

Events Director

Jan 2025 – Present

UNSW Bioinformatics Society

Sydney, Australia

- Lead planning and execution of 5+ events per semester including technical workshops and networking nights (100–200 attendees)
- Organise Q&A panels with researchers from Garvan Institute, Children's Cancer Institute, and Commonwealth Bank

Student Ambassador & SAP Leader

June 2024 – Present

UNSW Engineering

Sydney, Australia

- Meet regularly with course faculty to provide student feedback on curriculum and cohort sentiment; contributed to course improvements
- Awarded SAP Leader Award (2024) for contributions to student experience and faculty collaboration

Campus Ambassador

Sept 2023 – Present

Notion

Sydney, Australia

- Organise workshops promoting productivity tools; design custom Notion templates for academic workflows

TECHNICAL SKILLS

Languages: Python, C/C++, R, MATLAB, JavaScript/TypeScript, Bash

Data Science & ML: NumPy, Pandas, Scikit-learn, Matplotlib, TensorFlow, Jupyter

Bioinformatics: RStudio, Bioconductor, BLAST, PyMol, Galaxy, sequence alignment, variant analysis tools

Web & Databases: React, Flask, Streamlit, MongoDB, REST APIs

Hardware & CAD: Arduino, Raspberry Pi, SolidWorks, embedded C++, GPS/GSM modules

Tools: Git, Linux, Docker, LaTeX

SELECTED AWARDS

1st Prize, UNSW Societal Impact of AI Symposium (2025) | 3rd Place & People's Choice, UNSW Buildathon (2024)

People's Choice Award, UNSW Innovator's Pro Pitch Fest (2024) | SAP Leader Award, UNSW Engineering (2024)