

## EDUCATION

### MEng Biomedical Engineering (Predicted 1<sup>st</sup> Class Hons), Imperial College London

**Sep 2023 – Jun 2027**

- 1<sup>st</sup> Class Honours in Years 1 & 2. Third Year: Specialising in Computational Biomedical Engineering.
- Key Modules: Programming (81%), Advanced Mathematics (80%), Electronics and Electromagnetics (86%), Fluid & Solid Mechanics (80%), Signal Processing (79%).
- Second Year Design Project: Designed a Smart Dumbbell for elbow rehabilitation with embedded sensors, providing real-time data tracking and analytics through a custom Unity-based app with gamified features.
- Active member of Programming, Algorithmic Trading, Finance, NeuroTech, and Computational Biology society.

### A-Levels & GCSE, Royal Grammar School, High Wycombe

**Sep 2017 – Aug 2023**

- Achieved A\*, A, A at A-Level in Mathematics, Further Mathematics, and Physics.
- Extended Project Qualification (EPQ): Using Nanotechnology in Drug Delivery.
- Awards: UKMT Senior Maths Challenge – Bronze, British Physics Olympiad – Bronze, Duke of Edinburgh – Silver.
- Roles: Maths Ambassador & Mentor, UK Space Design Competition Top Participant.
- Achieved 4 x Level 9s (including Mathematics and English Language/Literature), 6 x Level 8s, 1 x Level 7 at GCSE.

## WORK EXPERIENCE

### Research Assistant, A Yang Lab, Imperial College London

**Oct 2025 - Present**

- Improving deep learning segmentation models (nnU-Net) for organ analysis by increasing F1 score by 10%.
- Performing precise image annotation, dataset cleaning of 50 CT images and training models using Python.

### Data Analytics Summer Internship, St Bartholomew's Hospital

**Jun - Sep 2025**

- Conducted quantitative analysis of 160 bone scans to evaluate diagnostic performance of joint prostheses.
- Programmed Python scripts using Pandas, Seaborn, and Matplotlib to compute statistics and visualise trends.
- Synthesised data-driven insights with top consultants to interpret imaging data and deliver a statistical summary report informing departmental best practices.
- Work led to 3 accepted abstracts at an international conference, demonstrating real-world data applicability.

### Work Experience, Department of Nuclear Medicine, Guildford Hospital

**Aug 2022**

- Assisted medical consultants to understand how medical imaging data and radiopharmaceutical techniques are used for tumour detection and visualisation.
- Gained early exposure to data-driven diagnostic workflows and image analysis methodologies.

## EXTRACURRICULAR PROJECTS

### Stock Analyser

**Nov 2025**

- Built a Python object-oriented forecasting tool for stock price analysis using ARIMA models and ADF-Fuller tests, achieving 1.5% SMAPE and <7% error on test data.
- Added customisable stock and date selection features, enabling predictions of open, close, high, and low prices for investment insight.

### Java Cell-Growth Simulator

**Nov 2025**

- Implemented an OOP-based biological model with growth dynamics visualisation and real-time outputs.

### Amazon University Engagement Programme, Meal Planning App, Technical Lead

**Jun – Oct 2025**

- Co-developed a Flutter-based app with Firebase authentication, SQL database integration, Figma UI/UX design, and API connectivity for dynamic recipe generation.

### Fractal Generator

**Jun 2025**

- Programmed fractal visualisation algorithms (Mandelbrot, Julia, Newton Sets) in Python using vectorisation to accelerate computation by 10 times, along with a UI for interactive parameter control.

### Environmental Data Analysis

**Jul 2025**

- Conducted data cleaning, statistical modelling, and visualisation on real-world datasets (WHO, National Parks Service) using Pandas, Matplotlib and Seaborn to identify key correlations between trends.

### PNG Data Processing

**Dec 2024**

- Built programmes for PNG file parsing, password management, and file handling with modular, reusable scripts.

## SKILLS

**Technical Skills:** Python (Pandas, NumPy, SciPy, Matplotlib, Seaborn, Tkinter), MATLAB, C, C#, Java, SQL, Data Analysis & Visualisation, Algorithm Optimisation, Object-Oriented Programming, Unity Development, CAD Modelling, Flutter, Firebase, Figma.

**Certifications:** Pursuing *Data Scientist: Machine Learning* Certificate (Codecademy).

**Soft Skills:** Teamwork, Communication, Public Speaking, Adaptability, Attention to Detail, Problem Solving, Resilience.

**Language Skills:** English (Native), Kannada (Intermediate), French (Beginner).

**Interests:** Quantitative Finance, Chess, Strategic Poker, Volunteering, Badminton.