

## Education

### University of Oxford

DPHIL HEALTH DATA SCIENCE

*Oxford, UK*

*Sep 2023 - Sep 2027*

- **Fully-funded graduate studentship** from EPSRC Centres for Doctoral Training (CDT).
- Doctoral study in computational statistics, machine learning and data engineering within the ethically-responsible health research.

### University of Cambridge

MPHIL MACHINE LEARNING AND MACHINE INTELLIGENCE

*Cambridge, UK*

*Sep 2022 - Aug 2023*

- This Master programme provides a mixture of teaching and research of the state-of-the-art in Machine Learning.
- Core Modules: **Advanced Machine Learning**, Probabilistic Machine Learning, Computer Vision, Speech Recognition, **Deep Learning**, Reinforcement Learning, Computational Neuroscience.
- Elected as Student Deputy.

### University College London (UCL)

BSC PHYSICS WITH MEDICAL PHYSICS

*London, UK*

*Sep 2019 - Jun 2022*

- Classification: **First Class Honours** (overall grade above 85%)
- This Bachelor of Science has foundation in core Physics and explores its application to Medicine, together with Biomedical Engineering.
- Relevant Modules: Physics, **Mathematics**, Programming (**Python, MATLAB**), Data Analysis, Statistics, Machine Learning, Neural Engineering, Biophysics, **Neural Computation**.

## Work Experience

### G-Research

INCOMING SPRING INSIGHT INTERN

*London, UK*

*April 2024*

- Participate in a week-long residential programme on **Quantitative Finance**.

### University of Cambridge

ACADEMIC SESSION LEAD

*Cambridge, UK*

*Jul/Aug 2023*

- **Developed and delivered** beginner-friendly **academic sessions** on Artificial Intelligence for high-school students.
- Lectures were part of a program aimed at helping students from disadvantaged or underrepresented backgrounds make competitive university applications.

### J.P. Morgan Chase & Co.

SOFTWARE ENGINEER INTERN

*London, UK*

*Jun - Aug 2021 & Jun - Aug 2022*

- Worked in the Global Energy Technology team (2022) and the Futures & Options Trade Processing team (2021) within Corporate Investment Banking Technology.
- Deployed advanced technical skills, specifically in **Python** and **JavaScript**, working on concrete, business related full-stack projects.
- Proved **quick-learning** skills and **problem-solving** by completing all the tasks assigned.
- Improved professional and confident communication by interacting with business stakeholders and senior employee within the firm.
- Was offered a returning offer to the firm both years.

### UCL Fintech society

DATA AND AI CORRESPONDENT

*London, UK*

*Sep 2020 - Apr 2021*

- Wrote monthly articles on "hot topics" and/or brief analysis of theoretical concepts in the field of Artificial Intelligence.
- Links to each article: The concept of Superintelligence - How AI is revolutionising social media marketing - When will we have self-driving cars on the road? - Amazon Pharmacy and the future of e-Pharmacies - AI and the COVID-19 Pandemic.

## Research Experience

### Medical Research Council (MRC) Biostatistics Unit (BSU)

POSTGRADUATE RESEARCH STUDENT

*Cambridge, UK*

*Apr 2023 - Ongoing*

- **Disease subtyping and biomarker discovery using high-dimensional Bayesian mixture models with feature selection**  
This project aims to enhance unsupervised **Bayesian Mixture Models** with Variational Inference for effective latent clustering and biomarker extraction introducing Variational Annealing. Publicly available **multi-omic pan-cancer data** is used for this purpose.  
Supervisors: Dr Filippo Pagani & Dr Paul D. W. Kirk

## Cambridge AI Safety Lab

RESEARCH ASSISTANT

Cambridge, UK

Dec 2022 - Ongoing

- Working on **Scalable Interpretability** to automate interpretation of "black-box" architectures with **deep-learning-based methods**.

## UCL Progression of Neurodegenerative disease (POND) group

London, UK

FINAL YEAR RESEARCH STUDENT – GRADE: 87%

Academic year 2021-2022

- How reproducible are Alzheimer's disease progression subtypes?**

Investigated the reliability and transferability of the Subtype and Stage Inference (SuStain) algorithm, an **unsupervised machine-learning** technique presented by the POND group which is able to disentangle different level of disease heterogeneity in various heterogeneous diseases. Applied this algorithm across large cohorts of **brain MRI scans** in ADNI, ANMerge and OASIS, to subtype and stage individuals into distinct **Alzheimer's disease progression** pathways and analyse the resulting models.

Supervisors: Dr. Neil Oxtoby & Dr. Cameron Shand

## Honors & Awards

### Sidney Russ Award

UCL DEPARTMENT OF MEDICAL PHYSICS AND BIOMEDICAL ENGINEERING

Academic year 2021-2022

Award received as **best performing finalist** undergraduate student. Was also added to the **Dean's List**.

### Jackson Lewis Scholarship

UCL FACULTY OF ENGINEERING SCIENCES

Academic year 2020-2021

A very prestigious award, given to only one recipient per Faculty each year, on the basis of **academic excellence** and out-standing performance. Link to article.

### John Clifton Prize

UCL DEPARTMENT OF MEDICAL PHYSICS AND BIOMEDICAL ENGINEERING

Academic year 2020-2021

Award received as **best non-finalist** undergraduate student.

## Skills

### PROGRAMMING

*Experienced:* **Python** • PyTorch • Tensorflow • JAX • **MATLAB** • JavaScript • React

*Familiar:* Java • HTML • CSS • R • Julia

### SOFT

*Communication:* Public Speaking • Listening • Empathy • Presentation

*Managerial:* Hard Worker • Problem Solver • Quick Learner • Team Working • Leadership • Time Management

### LANGUAGES

*Native or Advanced:* Italian • French • English

*Beginner:* Spanish • German

## Extracurricular Activity

### Nucleate Italy

HEAD OF TECHNOLOGY AND TALENT

Sep. 2022 - Present

- Collaborating in a free student-run program that facilitates the formation of early-stage life sciences and BioTech companies.
- Impact the industry and community focusing on outreach, networking and DE&I.
- I organised and **moderated** the insightful event **"Promoting Biotech Companies in Italy"** in collaboration with Nucleate and United Italian Societies and sponsored by the Italian Consulate and the Italian Cultural Institute in London.

### Rotaract Club Terre Cremasche, District 2050

Crema, Italy

SECRETARY

Sep. 2022 - Present

- Organised philanthropic services aiming at supporting local community and businesses, as well as fundraising for non-profit.

### UCL Italian Society

London, UK

WELFARE OFFICER

Sep. 2020 - Jun 2022

- Ensuring an open environment, organising inclusive activities, checking the wellbeing of every member.
- Organised speaker events involving important representatives of the Italian political and economic landscape, such as: former president Enrico Letta, Honourable Carlo Calenda and Prof. Carlo Cottarelli.