# Michele Cespa - Curriculum Vitae

3rd Year Student,
Girton College,
University of Cambridge

Tel.: +44 7483 248 302
*e-mail*: michele.cespa@gmail.com
https://github.com/m-cespa
https://m-cespa.github.io/

**Education:**

MSc Artificial Intelligence & Machine Learning, Imperial College (offer accepted)

BA (Hons) Natural Sciences, University of Cambridge (Academic Scholar):

2nd Year: Natural Science Tripos Part IB: Physics A (1st Class), Physics B (1st Class), Mathematics (1st Class)

1st Year: Natural Science Tripos Part IA: Physics (1st Class), Chemistry (1st Class), Mathematics (1st Class), Materials Science (1st Class)

City of London School (Academic Scholar):

A Levels: A* Grades in: Physics (top of the year), Chemistry, Mathematics, Further Mathematics

GCSEs: 9 Grades (on 1-9 GCSE scale): Mathematics, Physics, Chemistry, Biology, English Language & Literature, French, Spanish, Religious Studies, Classical Greek, Latin

**Programming Languages:** Python, SQL, C++, Bash/Zsh (mac & linux), HTML/CSS

**Technical Skills:** PyTorch, Jupyter, Git, LaTeX, Raspberry Pi, Arduino, Excel

**Languages:** *Native:* English, Italian; *Intermediate:* Spanish, French

**Experience:**

[2025]   Meta Software Engineering Summer Intern (accepted, starting in June)

[2025]   Odyssey Fellow (previously Polaris Fellowship)

[2024]   Research Intern at ARIA funded lab in University of Cambridge Biochemistry Department

- Worked on data driven models of biological systems and developed an MLP to learn non-linear dynamics of feedback Peltier heater system
- Built Raspberry Pi operated reactors to collect growth data with custom circuitry and a github repository outlining software
- Learned about Koopman operator theory, Dynamic Mode Decomposition and other algorithmic methods

[2024]   Cambridge AI Safety Hub (CAISH) Fellow

[2024]   Zero Gravity (charity) Volunteer

[2024]   Punting Chauffeur for the Trinity College May Ball

[2022]   Athena Tuition Tutor

- 3 months of Physics, Chemistry & Mathematics tutoring for students aged 11-16 including Oxbridge and competitive independent school applicants

[2022]   Private GCSE Physics Tutor

[2021]   Colet Volunteer Mentor

- Provided remote Mathematics tutoring to a variety of students up to and including GCSE level

[2020]   eBay Trading Cards Shop

- Independently ran a trading cards business on eBay earning over £3000 over the course of 2 years

**Academic Achievements:**

[2024]   Alice Violet Jenkinson Academic Scholarship awarded by Girton College after 2nd Year examinations

[2023]   Angela Dunn Gardner Academic Scholarship awarded by Girton College after 1st Year examinations

[2022]   City of London School Scholar's Prize in A-Levels

[2021]   Cambridge Chemistry Challenge, Gold

[2021]   Royal Society of Chemistry Olympiad, Bronze

[2020]   City of London School Scholar's Prize in GCSEs

[2015]   Academic Scholarship for duration of studies (7 years) at City of London School

**Recent Coding Projects:**

[2025]   DDM (Differential Dynamic Microscopy) Codebase

[2025]   Random Forest built from scratch using only python numpy & pandas (tested with titanic data)

[2024]   General Relativity Helper web-app for symbolic tensor algebra

| | |
|---|---|
| [2024] | Neural Network built from scratch using only python numpy |
| [2024] | Facebook ticket/event trading bot using Optical Character Recognition (in progress) |
| [2024] | MLP trained on peltier heater data |
| [2024] | ResNet trained on general image recognition |
| [2024] | CNN trained on MNIST digit recognition |
| [2024] | RPi Bioreactor github repository |
| [2024] | Hankel (delay embed) DMD Algorithm for data driven discrete time series evolution (for presumed Markovian processes) |

**Hobbies:** Olympic Weightlifting, Electric Guitar, Trading/Strategy Card Games