

Marlow Eliot

London, UK | 07739 466811 | marlow.eliot.26@ucl.ac.uk | [linkedin.com/in/marloweliot](https://www.linkedin.com/in/marloweliot)

MSc student in **AI for Sustainable Development** at UCL, with a **First** in Computer Science and AI. Interested in **applied machine learning and research**, building systems that find structure in messy real-world data, as well as **AI governance, safety and policy**.

EDUCATION

University College London | *MSc Artificial Intelligence for Sustainable Development* Sep 2026 – Sep 2027

- Modules including: **Accountable, Transparent and Responsible AI**; Deep Representations and Learning; Probabilistic Modelling; Applied Artificial Intelligence.

University of Sussex | *BSc (Hons) Computer Science and Artificial Intelligence, First-Class Honours* Sep 2023 – Jun 2026

- **Dissertation (88/100):** *self-supervised learning pipeline for behavioural analysis of spatiotemporal data*.
- Modules including: Applied Machine Learning, Neural Networks, Advanced Natural Language Engineering, Data Structures and Algorithms.
- Selected to represent the university in an **international COIL debate** on the societal impacts of AI.

PROJECTS

Self-Supervised Behaviour Discovery (BSc Dissertation) | *Python, PyTorch, HDBSCAN, UMAP, scikit-learn* 2025 – 2026

- Built an **end-to-end pipeline** that discovers behavioural states in **7.4 million frames** of 3D movement data from 52 tracked bumblebees, with **no manual labelling**.
- Used a **convolutional autoencoder** to learn movement representations and **HDBSCAN** to cluster them into behaviours.
- Ran a systematic architecture search that **cut reconstruction loss to about 1.5% of baseline**, and showed that better reconstruction does not guarantee more stable clusters.

Evolving Flocking Behaviour | *Python, PyBullet, evolutionary algorithms, NumPy* 2025

- Rebuilt Reynolds' boids model in a **PyBullet physics simulation** with randomly placed obstacles to prevent overfitting.
- Benchmarked **four evolutionary algorithms** (hill climber, microbial GA, spatial GA, island-model GA) on tuning flock parameters.
- Proposed a **novel stratified model** with separate rules for edge and inner agents, which **outperformed the standard model under all four algorithms**.

Environmental Degradation Database | *Assisted a World Vision Technical Advisor* Jan 2026 – Apr 2026

- Built a database designed for use by **AI agents**, linking each environmental issue to evidence from tracking data, surveys, studies and papers.
- Tested it on **Armenia** with the advisor for the Middle East and West Asia region, to help field teams identify local issues and choose responses.

EXPERIENCE

The Badger, University of Sussex student newspaper | *Senior Print Editor and Treasurer* Jul 2024 – May 2026

- Led editing and production for a monthly paper with a **1,500-copy print run**, and **managed its budget** as Treasurer.
- As Science and Technology Editor, led the section to a **nomination for Best Science and Technology Publication** at the 2026 SPA Awards.

RSPCA, Huddersfield branch | *Web Design Work Experience* Jun 2022

- Reviewed the branch website and proposed a redesign of its adoption pages.

SELECTED WRITING

- Co-founder, **The Pasturage Institute (Substack)**: non-partisan essays on politics, philosophy, and policy, 2026.
- "Does One ChatGPT Prompt Really Use a Bottle of Water?", *The Badger*, May 2026.
- "The TikTok Ban, ByteDance, and the 'Splinternet'" (with Harry Turnbull), *The Badger*, Feb 2025.
- "Running out of Data?", *The Badger*, Sep 2024.

SKILLS

- **Machine learning:** PyTorch, scikit-learn, self-supervised and unsupervised learning, clustering (HDBSCAN, UMAP), evolutionary algorithms.
- **Programming:** Python, NumPy, pandas, SQL, JavaScript, HTML/CSS, Git, PyBullet.
- **Other:** Writing and editing, budgeting, public debate, bouldering.