KONSTANTINOS MITSIDES

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Education

PhD Artificial Intelligence, Imperial College London **10/2024 - Present**

Concentrations: Open-Endedness, Reinforcement Learning, Evolutionary Algorithms

Supervisor: Prof Antoine Cully

Scholarships: EPSRC DTP Studentship, Scholarship Foundation of the Cyprus Government

MSc Artificial Intelligence, Imperial College London **10/2023 - 10/2024**

Final Grade: Distinction

Awards: "Distinguished" status for MSc thesis (Grade: 87%)

BSc Mathematics, University College London (UCL) **09/2020 - 09/2023**

Final Grade: First Class Honours

Scholarships: Academic Excellence Scholarship - Scholarship Foundation of the Cyprus Government

Relevant Courses: Probability & Statistics, Stochastic Processes, Algebra, Mathematical Methods, Analysis, Graph Theory

The English School Nicosia, Cyprus **09/2012 - 06/2019**

A-Levels: Further Mathematics (A*), Mathematics (A*), Physics (A*), Greek (A)

Awards: Highest Mark in Europe and Highest Mark in Cyprus in A-Level further Maths and Maths respectively

Publications

K. Mitsides, M. Faldor, A. Cully - Dreaming in Code for Curriculum Learning in Open-Ended Worlds, arXiv preprint, 2026

K. Mitsides, M. Faldor, A. Cully - Scaling Policy Gradient Quality-Diversity with Massive Parallelization via Behavioral Variations at GECCO 2025

Projects

01/2024 - 10/2024

Large Language Models & Backend Software Engineering – ML Software Engineering MSc Group Project **LearnMore**

- Developed an AI-powered quiz system with abstractive and extractive LLMs to evaluate comprehension in speed reading.
- Implemented a novel LLM system to dynamically adjust reading speeds by assessing text complexity in real-time.

Deep Learning & Deep Graph-Based Learning - MSc Projects

- Developed a ResNet-50 based pipeline for a 20-class ImageNet subset, achieving 91.30% accuracy on the test set.
- Engineered pipelines using VAE for MNIST and DCGAN for CIFAR-10 image generation.
- Developed a unique generative GNN-based pipeline for brain graph super-resolution. **LearnMore**

Work Experience / Competitions

Graduate Teaching Assistant – Imperial College London **01/2025 - Present**

- Mentoring students through the end-to-end lifecycle of various Machine Learning projects.
- Co-supervised an MSc thesis in Reinforcement Learning and Evolutionary Computation, which achieved Distinction.
- Leading tutorial sessions and grading assignments in Deep Learning, Natural Language Processing, Python modules.

The Data Open Competition Europe 2021 / Ready Trader Go – Citadel / Optiver **10/2021 - 11/2021**

- Performed sentiment analysis, uncovering a trend of higher popularity for headlines with negatively charged emotional content.
- Developed a profitable trading bot to enhance liquidity in a trading book, leveraging historical data analysis.

Staff Sergeant - National Guard of Cyprus **07/2019 - 09/2020**

- Led a team of 30 soldiers from diverse backgrounds, planning their daily army service schedules and days off.
- Dealt with unexpected circumstances and made quick decisions to develop workarounds.
- Attended weekly meetings with military officers to share ideas on improving the camp's operations.

Chief Engineer – F1 in Schools World Finals **09/2017 - 09/2018**

- Designed and produced a miniature car via Solidworks CAD, advancing to World Finals as Cyprus' second-fastest.

Additional Information

Technical Skills: Python (JAX, PyTorch, Hugging Face, vLLM), Git, Linux, Docker, Apptainer, WandB

Math Competitions: Top 3 Places in National Math Olympiads & Kangaroo Math Competitions

Sports / Music: Multiple prizes, medals and national records in swimming / Grade 8 in Piano and Theory of Music

Languages: English (fluent), Greek (native)