KONSTANTINOS MITSIDES

139 George Street, London | k.mitsides@cytanet.com.cy | LinkedIn | GitHub | Website

Education

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

Concentrations: Deep Reinforcement Learning, Evolutionary Algorithms

Scholarships: Doctoral Scholarship Award by the Department of Computing in Imperial College London

Supervisor: Dr Antoine Cully

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

Final Grade: Distinction (Expected)

Courses: Deep Learning, Natural Language Processing, Deep-Graph Based Learning, Reinforcement Learning

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

Projects

01/2024 – 10/2024

Deep Reinforcement Learning & Quality Diversity – MSc Research Thesis Project

- Developed MCPG-ME, an algorithm combining Monte Carlo Policy Gradient with MAP-Elites to overcome pure QD challenges.
- Demonstrated MCPG-ME's ability to efficiently and scalably find diverse, high-performing solutions in continuous control tasks, surpassing established baselines.
- Proved MCPG-ME's superior runtime efficiency and scalability, performing up to 9 times faster than SOTA algorithms.

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

- 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.

Work Experience / Competitions

The Data Open Competition Europe 2021 – Citadel **11/2021 - 11/2021**

- Performed sentiment analysis, uncovering a trend of higher popularity for headlines with negatively charged emotional content.

Ready Trader Go Competition – Optiver **10/2021 - 11/2021**

- 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 - 09/2028**

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

Additional Information

Software Tools: Python, JAX, BRAX, QDAX, PyTorch, Scikit-learn, NumPy, Pandas, Matplotlib, Flax

Online Courses: Machine Learning Specialisation - Stanford Online, Data Structures & Algorithms - Udemy

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)