

KONSTANTINOS MITSIDES

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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

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

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- 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.
- Showcased 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

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- 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.

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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

Programming Language: Python

Software Tools & Libraries: JAX, PyTorch, BRAX, Scikit-learn, NumPy, Pandas, Matplotlib, Flask, QDAX

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)