# Ivan Majić

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# **EDUCATION**

## **University College London**

London, UK

**PhD** Applied Mathematics

Oct 2024-Present

• Optimal Transport and Reinforcement Learning

# **University College London**

London, UK

## MSc Mathematical Modelling (Distinction)

Sep 2023-Sep 2024

• Relevant modules: Quantitative and Computational Finance, Operational Research and its Applications, Frontiers in Mathematical Modelling and Advanced Modelling Mathematical Techniques.

## **University College London**

London, UK

## **BSc** Mathematics (First Class Hons)

Sep 2020-Jul 2023

Relevant modules: Machine Learning for Domain Specialists, Programming in Python, Probability & Statistics, Applied Stochastic Methods.

# **Oswestry School**

Oswestry, UK

**A-levels** 

Sep 2018-Aug 2020

- Mathematics (A\*), Further Mathematics (A\*), Physics (A\*).
- Selected for the prestigious HMC Scholarship out of thousands of students in 14 countries in Central and Eastern Europe.

# **EXPERIENCE**

# **University College London**

London, UK

# **Teaching Assistant**

Oct 2024-Present

Taught a weekly problem class in Financial Mathematics to a group of 100 students, fostering engagement through
interactive activities like competitions and group challenges, increasing the student satisfaction rate by 50% from the
previous year.

# **Lead Department Representative**

Oct 2023-Sep 2024

- Elected by my peers to take on a leadership role in the development and enhancement of the programmes in our Department, after serving as a representative every year for the previous 3 years.
- Took part in designing a new MSc course as the sole student member of the departmental teaching committee.

#### **PROJECTS**

# **University College London**

London, UK

## **MSc Project**

May 2024-Sep 2024

- Utilised an interlinked Reinforcement Learning agent approach to the optimal control of batteries in a domestic setting, demonstrating that the approach can reduce costs by intelligently managing the batteries.
- Discovered ways of training multiple different agents in the same session, using the TF-agents library outside of its intended purpose.

#### **Machine Learning Project**

Mar 2023-April 2023

- Employed Pandas, NumPy, and machine learning techniques to clean up and interpret the data set containing gene expression for patients diagnosed with different tumours.
- Trained the model using Naive Bayes classifier and Logistic Regression and compared the effectiveness using cross-validation scores and confusion matrices.

### **SKILLS**

Programming: Python, Matlab

Languages: Serbian - Native; English, Croatian - Fluent; German - Basic

Competencies: Microsoft Office Suite, LATEX