

# Ervin Macić

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## EDUCATION

### University of Oxford

*Candidate for Master of Science in Mathematics and Computer Science*  
GPA: 78.9% – Distinction (rank 11/51)

Oct. 2024 – June 2028  
Oxford, United Kingdom

### University of Sarajevo

*Candidate for Bachelor of Engineering in Computer Science*  
GPA: 9.8/10.0 – Top of class

Oct. 2023 – July 2024  
Sarajevo, Bosnia and Herzegovina

## SKILLS

**Programming:** Python (PyTorch, TensorFlow, NumPy, Pandas), C++, C, Haskell, Scala, JavaScript, Git, LaTeX

**Languages:** Bosnian (Native) | English (professional proficiency, TOEFL 115/120) | German (limited proficiency, B1)

## PROJECTS AND EXPERIENCES

### Discover Citadel

*Participant*

Mar. 2025  
London, United Kingdom

- Learned about the Citadel and Citadel Securities business through panel discussions, talks, and hands-on challenges
- Gained insight into the uses of deep learning models in quantitative finance workflows
- My team won 1<sup>st</sup> place in the engineering and 2<sup>nd</sup> place in the trading competition out of 10 teams in total

### AI Alignment Research Bootcamp Oxford

*Participant*

Jan. 2025  
Oxford, United Kingdom

- Participated in a 2-week intensive bootcamp to rapidly build research skills in AI safety
- Built gpt-2-small, learned cutting-edge interpretability and AI safety techniques like Sparse Autoencoders and Reinforcement Learning from Human Feedback
- Replicated key research papers in mechanistic interpretability and reinforcement learning

### Isaac code

*Junior Machine Learning and IoT Engineer*

Feb. 2021 – Oct. 2024  
Glamoč, Bosnia and Herzegovina

- Worked on a smart cattle monitoring system “Cow Gazer” making extensive agriculture more efficient and increasing animal welfare, co-funded by the European Union through the EU4AGRI grant
- Configured weight scales, cameras, and Raspberry Pi devices with AI accelerators enabling data collection and processing
- Implemented object detection to identify cattle and forecasting algorithms on weight data to notify farmers of trends and unusual behaviour

### ARTI Analytics

*AI Research Associate*

Sept. 2023 – Oct. 2024  
Sarajevo, Bosnia and Herzegovina

- Designed experiments and evaluation metrics and implemented them in PyTorch and TensorFlow
- Developed extension to the TensorFlow neural network module allowing the creation, visualisation, and analysis of unique neural network structures while maintaining training efficiency
- Sped up model training with minor losses in accuracy using decomposition and quantization algorithms

### Bosnian-Herzegovinian Math Olympiad Society

*Lecturer and Problem Proposer*

Seasonal  
Sarajevo, Bosnia and Herzegovina

- Lectured and organised mock exams at the International Math Olympiad (IMO) preparation camp for the Bosnian-Herzegovinian team
- Proposed and graded three out of the six problems for the Bosnian-Herzegovinian IMO Team Selection Test 2024
- Acted as the leader of the IMO team during the 3-week International Math Summer Camp 2024 in Beijing, China, where I attended problem-selection meetings, graded contestants’ papers and proposed a problem for the mock IMO competition

## SELECTED AWARDS AND HONOURS

**Bronze medal, International Mathematical Olympiad 2023**

Chiba, Japan

**Bronze medal, International Mathematical Olympiad 2021**

St Petersburg, Russia (Online)

**Silver medal, Balkan Mathematical Olympiad 2021**

Cyprus (Online)

**Second prize, Non-Trivial Fellowship 2023**  
**Open Philanthropy Undergraduate Scholarship 2024**  
**BIG Scholar, Global Talent Fund 2024**

*Online*