

Education

- Oct '24 – Today **DPhil in Autonomous and Intelligent Machine Systems**, *Oxford University*.
 - 4-year DPhil at the Oxford AIMS CDT under Prof. Philip Torr.
 - Funded by a 250k USD Microsoft studentship.
- Sep '22 – Jul '24 **MSc in Artificial Intelligence**, *University of Bologna*.
 - GPA: **29.73/30**, top of the class (170 students). Graduation grade: **110 cum laude**.
- Oct '19 – Jul '24 **Excellency Degree**, *Institute of Superior Studies*, Bologna, Italy.
 - 7 STEM students are admitted each year and are provided with a personal tutor, exemption from tuition fees and free accommodation. Requires taking 5 additional courses/year and maintaining a 28/30 GPA.
 - GPA: **29.75/30**. Equivalent to a second-level Master's Degree (EQF8).
- Oct '19 – Jul '22 **BSc in Computer Science**, *University of Bologna*.
 - GPA: **29.77/30**, top of the class (150 students). Graduation grade: **110 cum laude**.

Publications

- Jun '24 Emanuele La Malfa, Christoph Weinhuber, Orazio Torre, Fangru Lin, **Samuele Marro**, Anthony Cohn, Nigel Shadbolt, Michael Wooldridge, *Code Simulation Challenges for Large Language Models*, arXiv:2401.09074.
- Jul '23 **Samuele Marro**, Michele Lombardi. Computational Asymmetries in Robust Classification, *40th International Conference on Machine Learning (ICML 2023)*.
- Dec '22 Andrea Asperti, Davide Evangelista, **Samuele Marro**, Fabio Merizzi. Image Embedding for Denoising Generative Models, *Springer Artificial Intelligence Review*.
- Jul '22 **Samuele Marro**, Luca Donno. ERC-5375, *Ethereum Foundation*.
- May '21 **Samuele Marro**, Luca Donno. Green NFTs: A Study on the Environmental Impact of Cryptoart Technologies, arXiv:2202.00003.

Research and Teaching Experience

- Nov '23 – Today **Predoctoral Research Fellow**, *University of Bologna*, Bologna, Italy.
 - Department fellowship on adversarial robustness under Prof. Michele Lombardi.
- Mar '24 – May '24 **Visitor**, *University of Oxford*, Oxford, United Kingdom.
 - Research visit to the Department of Computer Science to conduct research on the Theory of Mind of LLMs under Dr. Emanuele La Malfa and Prof. **Michael Wooldridge**.
- Dec '19 – Oct '23 **Student Researcher**, *University of Bologna*, Bologna, Italy.
 - Developed, under Profs. Michele Lombardi and Michela Milano, an **adversarial defense** (implemented in **Python + PyTorch**) with certified robustness.
 - Proved that training a robust ReLU model is Σ_2^P -hard, with implications for adversarial defense design.
- Sep '22 – Jan '23 **Teaching Assistant**, *University of Bologna*, Bologna, Italy.
 - Taught the Applied ML module of "Introduction to Machine Learning" for the Fall '22 semester.
- Nov '21 – Mar '22 **Machine Learning Intern**, *MindIt Srl + Kantar*, Bologna, Italy.
 - Developed a **Tensorflow** LSTM implementation compatible with **IBM CPLEX** optimization algorithms.
 - Rewrote Meta's FBProphet time series model in **Tensorflow**.

Research Awards

- Mar '24 **Microsoft Studentship**, 250k USD.
 - Studentship to cover fees & salary for my DPhil at Oxford University.
- Nov '23 **AIxIA "Leonardo Lesmo" Award**.
 - Award for the best Italian AI thesis, granted by the Italian Association for Artificial Intelligence.
- May '21 **GreenNFT Award**, 3k USD.
 - Award for research contributions on understanding the environmental impact of blockchains.
- Jan '21 **CINECA HPC Grant**, 170k core-hours.
 - Grant for the Galileo100 HPC cluster for research on the computational complexity of adversarial attacks.