

Education

- Sep '22 – Today **MSc in Artificial Intelligence**, *University of Bologna*.
◦ Current GPA: **29.75/30**, top of the class (170 students).
- Oct '19 – Today **Excellency Degree (COTS)**, *Institute of Superior Studies*.
◦ 7 STEM students are admitted each year and are provided with a personal tutor, exemption from tuition fees, free accommodation and an annual scholarship throughout their Bachelor's and Master's degrees.
◦ Yearly requirements: 28/30 GPA, no grade lower than 24/30, must take 5 additional excellency courses.
◦ Current GPA: **30/30**. 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

- 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 – Now **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.
◦ Wrote a **Julia** interface to formally verify the effectiveness of the defense using **MIPVerify.jl + Gurobi**.
- 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**.
- Mar '21 – May '21 **Blockchain Environmental Impact Project**, *University of Bologna*, Bologna, Italy.
◦ Created a model to estimate the environmental impact of individual transactions on Ethereum.
◦ Developed Green NFT Helper, a **JavaScript + Svelte.js** website to help users reduce their emissions.

Research Awards

- 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.
- Jul '19 **Ancalau Award**, 3k EUR.
◦ Award and incubator for innovative R&D projects, obtained for building PAX, a ML-powered drone to detect illegal landfills.