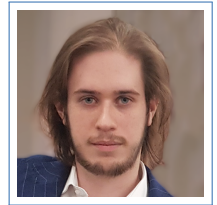


Samuele Marro

Student Research Assistant

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DOB: June 9th, 2000



Education

- Sep '22 – Today **MSc Artificial Intelligence**, *University of Bologna*, Graduation: Jul '24.
- Current GPA: **29.75/30**, top of the class (170 students).
- Oct '19 – Today **STEM Excellency Degree**, *Institute of Superior Studies*, Bologna, Graduation: Jul '24.
- 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**.
- Oct '19 – Jul '22 **BSc Computer Science**, *University of Bologna*.
- GPA: **29.77/30**, top of the class (150 students). Graduation grade: **110 cum laude**.

Publications

- Apr '23 **Samuele Marro**, Michele Lombardi. Computational Asymmetries in Robust Classifiers, *40th International Conference on Machine Learning (ICML 2023)*.
- Dec '22 Andrea Asperti, Davide Evangelista, **Samuele Marro**, Fabio Merizzi. Image Embedding for Denoising Generative Models, *Under review at Springer Artificial Intelligence Review*.
- Jul '22 **Samuele Marro**, Luca Donno. EIP-5375. Ethereum Foundation.
- May '21 **Samuele Marro**, Luca Donno. Green NFTs: A Study on the Environmental Impact of Cryptoart Technologies, <https://arxiv.org/abs/2202.00003>.

Experience

- Dec '19 – Today **Student Research Assistant**, *University of Bologna*, Bologna, Italy.
- Developed, under prof. 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.
 - Wrote a **Julia** interface to formally verify the effectiveness of the defense using **MIPVerify.jl** + **Gurobi**.
 - Obtained a 170k core-hour grant for the CINECA Galileo100 **HPC cluster**.
- Sep '22 – Today **Teaching Assistant**, *University of Bologna*, Bologna, Italy.
- Taught the Applied ML module of "Introduction to Machine Learning" for the Fall '22 semester.
- Jan '22 – Today **Solidity Developer and Auditor**, *Freelance*.
- Performed Smart Contract audits, Web3 integrations and secure Smart Contract development.
 - Specialized in EVM and EVM-like (e.g. Vite) security standards.
- Nov '21 – Mar '22 **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 '22 **Bitcoin Round 13 Hackathon**, 6k USD award.
- Wrote four smart contracts in **Solidity** for the Vite blockchain and developed unit tests with **Vuider** and **Javascript**.
- Mar '21 – May '21 **GreenNFT Hackathon**, 3k USD award.
- 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 to reduce their emissions.
- Mar '21 **Bitcoin Round 9 Hackathon**, 1k USD award.
- Developed a Chrome extension in **JavaScript** to search on IPFS directly from the omnibox.
- Nov '18 – Jul '19 **Ancalau Award**, 3k EUR.
- Trained in **Python** + **Tensorflow** a **CNN** to identify illegal dumping locations from aerial data.
 - Deployed the model as part of an Android app (written in **Java**) to capture aerial data and relay landfill locations in real time to a quadcopter.
- Oct '17 – Jun '18 **Independent Research**.
- Extended **Grammatical Evolution**'s Backus-Naur Forms to support runtime checks and automatic correction of invalid production rules in **C#** and **Python**.