Samuele Marro
Student Research Assistant

Bologna, Italy
(+39) 342 329-5042
✉ *marrosamuele@gmail.com*
DOB: June 9, 2000

Python, C#, C

Education

Sep '22 – Jul '24	**MSc Computer Science**, *University of Bologna*.
Oct '19 – Jul '24	**STEM Excellency Degree**, *Superior College of Bologna*, Graduation: Oct '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*.

Experience

Dec '19 – Today	**Student Research Assistant**, *University of Bologna*, Bologna, Italy.
	○ Developed, in collaboration with Drs. Michele Lombardi and Rebecca Montanari, an **adversarial defense** (implemented in **Python** + **PyTorch**) which is robust against white-box attacks.
	○ Wrote a **Julia** interface to formally verify the effectiveness of the defense using **MIPVerify.jl** + **Gurobi**.
	○ Implemented heuristics and training techniques to increase verification speeds 50-fold.
	○ Obtained a 170k core-hour grant for the CINECA **supercomputer cluster**.
Sep '22 – Today	**Teaching Assistant**, *University of Bologna*, Bologna, Italy.
	○ Taught the applied ML module of "Introduction to Machine Learning".
Jan '22 – Today	**Solidity Developer and Consultant**, *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.
	○ Introduced tools to mitigate numerical issues with non-linear components of LSTMs.
	○ Rewrote Facebook's FBProphet time series model in **Tensorflow**.
Mar '22	**Gitcoin Round 13 Hackathon**, <u>6k USD</u> bounty.
	○ Wrote four smart contracts in **Soliditypp** for the Vite blockchain.
	○ Wrote unit tests for such contracts using **Vuilder** and **Javascript**.
Mar '21 – May '21	**GreenNFT Hackathon**, <u>3k USD</u> bounty.
	○ Created a model to estimate the environmental impact of individual transactions on Ethereum.
	○ Identified techniques to reduce a user's individual impact by 70% with the help of **Python** scripts.
	○ Developed Green NFT Helper, a **JavaScript** + **Svelte.js** website to help users to reduce their emissions.
Mar '21	**Gitcoin Round 9 Hackathon**, <u>1k USD</u> bounty.
	○ Developed a Chrome extension in **JavaScript** to search on IPFS directly from the omnibox.
Nov '18 – Jul '19	**Ancalau Award**, <u>3k EUR</u> award.
	○ Trained in **Python** a **Tensorflow 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.
Feb '19 – Jun '19	**Tutor**, *Liceo Scientifico L. Cocito*, Alba, Italy.
	○ Provided one-on-one and one-on-two tutorship for students struggling with Mathematics and Physics.
Jun '17 – Jul '17	**Intern**, *Sistemi Tre*, Alba, Italy.
	○ Automated database queries through the in-house software interface using **AHK**, leading to a 3-4x increase in data retrieval speed.
	○ Assisted IT staff during on-site technical support.

Publications

Jul '22	**Samuele Marro**, Luca Donno. *EIP-5375*. Ethereum Foundation.
Apr '22	**Samuele Marro**, Michele Lombardi. *Asymmetries in Adversarial Settings*.
May '21	**Samuele Marro**, Luca Donno. *Green NFTs: A Study on the Environmental Impact of Cryptoart Technologies*.