Manuel **Di Agostino**

MASTER'S STUDENT IN COMPUTER SCIENCE

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Education

University of Parma	*Parma, Italy*
MASTER'S DEGREE IN COMPUTER SCIENCE (EXPECTED)	*Sep. 2024 - Jul. 2026*

University of Parma	*Parma, Italy*
BACHELOR'S DEGREE IN COMPUTER SCIENCE	*Sep. 2021 - Jul. 2024*

Grade: 110/110 *cum laude*
Title: "Valutazione sperimentale sull'individuazione automatica di errori di programmazione nel codice generato da LLM"
Supervisor: Prof. Enea Zaffanella
Co-supervisor: Prof. Vincenzo Arceri
Keywords: *Static Analysis, AI, LLM, Software Verification and Validation*

Interests

My primary academic interests lie in Software Verification, particularly in Static Analysis by Abstract Interpretation. During my internship, I worked on integrating the PPLite library into the Mopsa static analyzer, further enhancing my practical experience and technical skills in this field. My bachelor's thesis focused on evaluating the quality of source code generated by Large Language Models (LLMs) through static analysis.

Experiences

University of Parma	*Parma, Italy*
INTERNSHIP	*Oct. 2023 - Jan. 2024*

- Examined the Mopsa static analyzer (`https://mopsa.lip6.fr/`) through a series of benchmarks (coreutils-benchmarks, juliet-benchmarks)
- Integrated the PPLite library (`https://github.com/ezaffanella/PPLite`) into the framework
- Created a docker container to automate the installation (`manueldiagostino/mopsa:pplite`)

Tools and Software

Deep Neural Network Library	*From May 2024*

A flexible C++ library for building, training, and using deep neural networks. Modular, easy-to-use, and high-performance. The library supports various neural network architectures, efficient training tools, and robust inference methods (`https://github.com/unipr-org/deep-neural-network`).

Conferences and Workshops

2024	**Partecipant**, CSV 2024, 3th Challenges of Software Verification Symposium	*Venice, Italy*