



Francesco Torella



● ABOUT ME

Meticulous and Dedicated graduate student eager for work experience.

● EDUCATION AND TRAINING

27/09/2021 – 19/07/2024 Roma, Italy

BACHELOR DEGREE Sapienza Università di Roma

Projects and Practical Work:

Thesis project: Invented and developed a level-based color puzzle web game designed to encourage user creativity and enhance problem-solving skills through engaging, interactive challenges.

First Year Honor program:

- Participated in a computer vision project focused on enhancing personnel safety in industrial infrastructures.
- Researched and identified relevant datasets as my primary role for model development and training.

Second Year Honor program:

- Contributed to a research project on developing a large language model (LLM) for operations research problem-solving.
- Supervised the training dataset as my primary responsibility to ensure quality control.

Remote Sensing: computer vision project based on the implementation of a CNN-based model for labeling buildings and infrastructure from satellite images.

Knowledge and hard skills acquired:

Programming Fundamentals: programming paradigms and understanding of algorithms and data structures, with practical experience in languages like **Python, C, and Java**.

Software Design and Architecture: The ability to model complex systems and design software solutions using standard methodologies like **UML**, with a solid knowledge of database fundamentals.

Computer Systems: A grasp of how computer hardware and software interact, as well as foundational knowledge of operating systems and computer architecture.

Mathematics and Modeling: In-depth knowledge of **calculus, algebra, probability, and statistics**, with knowledge in **modeling and simulation** of physical processes and optimization through **operations research**.

Control Systems: An understanding of systems theory and the principles of **automatic control**.

Web Development: Knowledge of the core principles and technologies for building web applications.

Data Structures and Formal Languages: understanding of advanced data structures and the principles of formal languages and automata theory.

Telecommunications: Foundational knowledge of telecommunications systems, signal processing, and networking protocols.

Image and Video Analysis: Competence in fundamental concepts of **image processing** and **computer vision**, including algorithms for image analysis and pattern recognition.

Website <https://www.uniroma1.it/it/pagina-strutturale/home> |

Field of study Software and applications development and analysis | **Final grade** Cum laude | **Level in EQF** EQF level 6 |

Thesis Il rompicapo Hue Domino: ideazione e sviluppo di un'applicazione Web interattiva

16/09/2024 – CURRENT Milan, Italy

MASTER DEGREE Politecnico di Milano 1863

Projects and Practical Work:

Heart's Heaven: Designed and developed a web application for a fictional yoga center using **Vue.js** and **Nuxt.js**.

NightMi: Co-developed a mobile application for nightlife event booking using **React Native** and **Supabase**, integrating a payment system powered by Stripe.

Theoretical Knowledge:

Theoretical and Foundational Knowledge: Further knowledge in core computer science fields, including advanced **compilers and formal languages**, in-depth **database management**, and cutting-edge **computer architecture**.

Cybersecurity: A comprehensive overview of **cybersecurity principles**.

Data Centers: An understanding of the operational aspects of **data centers**.

Modern Web Development: Advanced knowledge of **user experience (UX) principles** and usage of modern **web frameworks and technologies**.

Mobile Application Development: Understanding of modern frameworks for building modern **mobile applications**.

Website <https://www.polimi.it/> |

Field of study Information and Communication Technologies (ICTs) not further defined , Software and applications development and analysis |

Level in EQF EQF level 7

● **LANGUAGE SKILLS**

Mother tongue(s): **ITALIAN**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C1	C1	C1	C1	C1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

● **SKILLS**

Languages: Python, C/C++, Java, JavaScript, TypeScript, HTML, CSS | Frameworks and Libraries: React, React Native, Vue.js, Nuxt.js, Bootstrap | Backend and DB: MongoDB, PostgreSQL, Node.js, Supabase | Version Control: git, github