Jacopo Meglioraldi

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Personal data

Birthdate:	04/10/1998 (26 years).
Birthplace:	Montecchio (RE), Italy.
Permanent address:	Reggio Emilia (RE), Italy.
Citizenship:	Italian.

Work History

Nov 2024 - Present — **Post-degree research scholarship at VARLab** (Virtual and Augmented Reality Laboratory), University of Bologna, Italy

Subject: Digitization of theatrical outfits and documents for Luciano Pavarotti Foundation

Feb 2024 - Dec 2024 — **Internship at VARLab** (Virtual and Augmented Reality Laboratory), University of Bologna, Italy

Subject: Analysis and testing of new learning algorithms for 2D to 3D reconstruction applied to fashion objects

Education

2021 - 2024 — **M.Sc. Artificial Intelligence**, University of Bologna, Italy.

Final grade: 107/110

Final dissertation topic: 3D Gaussian Splatting reconstruction with depth enhanced initialization

Advisors: Gustavo Marfia, Pasquale Cascarano

2017 - 2021 — **B.Sc. in Automation Engineering**, University of Bologna, Italy.

Final grade: 103/110

Final dissertation: Development of an sEMG-driven simulator for robotic hands interacting with simple objects

Advisors: Claudio Melchiorri, Roberto Meattini

Research Interest

AI for computer vision, diffusion models, generative AI, interactive physics simulations, XR application and theory, 3D volumetric reconstruction, immersive human-machine interactions

Submissions

November 2nd, 2024 — **IEEE AIxVR 2025** 7th International Conference on Artificial Intelligence & extended and Virtual Reality

Website: https://aixvr.tecnico.ulisboa.pt/Home.html.

Title: **A Comparative Analysis of 3D Modeling Methods for Integration into an Extended Reality Platform**

Authors: Pasquale Cascarano, Jacopo Meglioraldi, Giacomo Vallasciani, Vincenzo Armandi, Giulio Augello, Silvano Carradori, Shirin Hajahmadi and Gustavo Marfia

July 29th, 2024 **XR-SPro 2024** 3rd International Workshop on XR Solutions for Smart Production

Website: https://www.xr-spro.org/.

Title: **A comparative analysis of 3D reconstruction devices and algorithms**

Authors: Pasquale Cascarano, Jacopo Meglioraldi, Vincenzo Armandi, Silvano Carradori, Giulio Augello, Giacomo Vallasciani, Shirin Hajahmadi, Gustavo Marfia

Meaningful Experiencies

2018 - 2019 **Double Degree program AlmaTong**, Tongji University (ShangHai), China.

Additional courses taken: Chinese Langage 1 (30), Chinese Language 2 (30), Chinese History and Culture (28), Intercultural Communication (30)

Duration: 11 months

Volounteering

2019 - Present **AGESCI Scout instructor**, Reggio Emilia, Italy

Education of new generations to manual and survival skills, civil activism and character formation

2019 - 2021 **CARITAS homeless people care projects**, Reggio Emilia, Italy

2013 - 2018 **COMPITIAMO Teacher for foreign kids**, Cenacolo Francescano, Reggio Emilia, Italy.

Personal Skills

Language skills

Mother tongue: Italian

Other languages: English (Level B2),
                         Chinese (Level A1),
                         French (level A1)

Computer skills

OS: Windows, Linux Ubuntu, Android

Languages: Python, C++, LaTeX, HTML, React

Software: Microsoft Office, Gimp, Matlab, Blender, Unity, Godot, Arduino

Specific skills

Design and development of learning systems

Development of AI architectures for computer vision applications

Development of AI architectures for natural language processing

Knowledge of computational theory and calculus optimization

Foundamentals of computer graphics and 3D visualization

Foundamentals of XR for interactive application development

Design and development of cross-platform interactive apps

PLC programming for industrial applications

Knowledge of actuators and sensors for industrial application

Modelling and control of mechanical and electrical systems

Modelling and control of robotic agents

Digital drawing, photo editing and simple video-making

Soft skills

Problem solving, creativity and design, intercultural communication, collaboration, teamwork, leadership, negotiation, empathy, organization and management, decision making, autonomy, teaching.