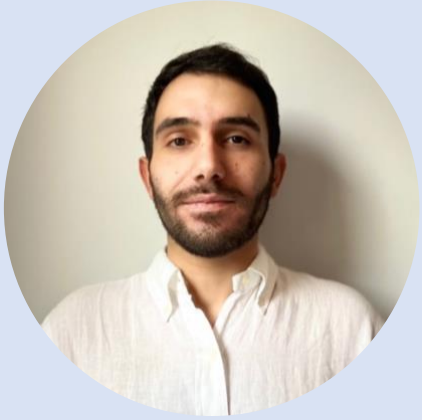

MATTEO BASTICO

Third-year PhD fellow of the Horizon 2020-Marie Skłodowska-Curie Actions-COFUND European doctoral program AI4TheSciences at Mines Paris – PSL University (France).

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: matteo-bastico

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SKILLS

- 3D Computer Vision
- Transformers, CNNs
- Semantic Segmentation
- Diffusion Models
- Point Clouds
- Python (PyTorch, CUDA)
- Scientific Writing
- Git and GitHub

LANGUAGES

Italian (First language)

English (C1)

Spanish (B2 – C1)

French (B2 – C1)

Driving license and car owner.

PROFILE

My PhD research focuses on advancing deep learning and computer vision for 3D data, with applications ranging from medical domain to broader 3D vision tasks. This includes working with transformer-based and convolutional deep learning architectures, as well as generative diffusion models.

I am dedicated to innovative R&D in 3D vision, with a strong commitment to scientific contributions and publications.

EDUCATION

PhD in Advancing 3D Vision and Deep Learning for Shape Analysis and Synthesis: Application to Knee Joint Modeling
2022 – 2025 (Expected by EoY) | Mines Paris – PSL, France

MSc in ICT for Internet and Multimedia *cum Laude*
2018 – 2021 | University of Padua, Italy

MSc in Telecommunication Engineering
2019 – 2021 | Polytechnic University of Madrid (UPM), Spain

BSc in Information Engineering
2015 – 2018 | University of Padua, Italy

EXPERIENCE

Deep Learning Research Scientist
2021 – 2022 | UPM, Spain

Participated in EU Horizon 2020 projects (GenoMed4All, PROCare4Life), designing, implementing, and publishing supervised deep learning architectures (Transformers, CNNs) in PyTorch for DNA, medical imaging, and 3D skeleton analysis.

ICT Help Desk Agent
2018 – 2019 | Il Gazzettino, Venice, Italy

Front-End Developer
2014 – 2015 | Valore4IT, Venice, Italy

SCHOLARSHIPS

AI4TheSciences, Horizon 2020-Marie Skłodowska-Curie Actions - COFUND European Program
2022 – 2025 | PSL University, Paris, France

Double Master's Degree program
2019 – 2021 | University of Padua, Italy & UPM, Spain

TEACHING

Image Segmentation & Vision Transformers
2024 – 2025 | Mines Paris – PSL, France

Students' internship supervision, guiding research projects
2024 | DIMA research module at Mines Paris – PSL, France

RELEVANT PUBLICATIONS

- *Rethinking Metrics and Diffusion Architecture for 3D Point Cloud Generation*. Under revision at **3DV**.
- *Coupled Laplacian Eigenmaps for Locally-Aware 3D Rigid Point Cloud Matching*. In Proceedings of **CVPR 2024.**
- *A Simple and Robust Framework for Cross-Modality Medical Image Segmentation applied to Vision Transformers*. In Proceedings of **ICCVW 2023**

For my complete bibliography please refer to my Google Scholar.