MATTEO BASTICO, Ph.D.

Deep Learning & 3D Computer Vision Researcher in Healthcare

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: linkedin.com/in/matteo-bastico

: matteo-bastico

: Cachan, 94230, France

SKILLS

- Transformers, CNNs
- Generative Diffusion Models
- Medical Imaging
- Semantic Segmentation
- 3D Point Clouds
- Python, PyTorch
- Large-Scale Training on HPC
- Git, GitHub

LANGUAGES

Italian (First language)

English (C1)

Spanish (B2 – C1)

French (B2 – C1)

Driving license and car owner.

PROFILE

Deep learning researcher specializing in transformer-based models and generative AI for medical applications. Developed large-scale architectures for surgery planning and clinical data analysis, with research published at CVPR, ICCVW, and 3DV. Experienced in cross-functional collaboration and bridging research innovation with practical healthcare challenges.

EDUCATION

PhD in Deep Learning and 3D Vision (Medical Application)
2022 – 2025 (Defended) | Mines Paris – PSL, France
Thesis : "*Advancing 3D Vision and Deep Learning for Shape Analysis and Synthesis: Application to Knee Biomechanical Modeling*"

MSc in ICT for Internet and Multimedia *cum laude*
2018 – 2021 | University of Padua, Italy
Thesis : "*Deep Learning for 3D Point Clouds in Autonomous Driving*"

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

Contributed to EU Horizon 2020 projects, such as GenoMed4All and PROCare4Life, coordinating work across technical teams and developing supervised deep learning models in PyTorch for DNA, medical imaging, and 3D skeletal data. Delivered end-to-end pipelines and co-authored 3 peer-reviewed publications.

IT Support Technician
2018 – 2019 | Il Gazzettino, Venice, Italy

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

SCHOLARSHIPS

AI4TheSciences, Horizon 2020-Marie Skłodowska-Curie Actions - COFUND European Doctoral 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

SELECTED PUBLICATIONS | First Author on All

- *"Rethinking Metrics and Diffusion Architecture for 3D Point Cloud Generation"*. **3DV 2026**.
- "*Conditional Point Transformer for Anatomical Landmark Detection on 3D Point Clouds"*. Under revision at **ISBI 2026**
- *"Coupled Laplacian Eigenmaps for Locally Aware 3D Rigid Point Cloud Matching"*. **CVPR 2024.**
- *"A Simple and Robust Framework for Cross-Modality Medical Image Segmentation applied to Vision Transformers"*. **ICCVW 2023**

For a complete list of publications, see my Google Scholar profile.