



Lorenzo Posti

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LinkedIn



Scholar



Publications



lposti



ML blog

About me

AI/ML Engineer with a Ph.D. in Astrophysics and 12+ years of experience in **data science, deep learning, and creative modelling**. Developing AI solutions for complex challenges, with a focus on physics and healthcare applications.

Eager to apply my scientific rigour and collaborative mindset to create impactful technologies that improve lives.

Skills

Technical:

- descriptive/predictive/generative/data driven modelling
- **machine / deep learning**, probabilistic modelling, CNNs, GNNs, clustering, gaussian processes
- image processing, probability / uncertainty estimation

Soft:

- positive attitude, constructive criticism, scientific rigour
- adaptability, fast learner, curiosity-driven
- public speaking, paper writing & reviewing

Education

- 2015-2012 **Ph.D. in Astrophysics** — Univ. of Bologna (IT)
Thesis: "On the luminous and dark matter distribution in early-type galaxies"
- 2012-2010 **M.Sc. in Astrophysics** — Univ. of Bologna (IT)
Grade: 110/110 cum laude
- 2010-2007 **B.Sc. in Astrophysics** — Univ. of Bologna (IT)
Grade: 110/110 cum laude

Honours & Prizes

- secured competitive **research grants** (> 100 k€)
- 200k CPU hours computing time at HPC facilities
- expert panel reviewer for Spanish Space Agency
- reviewer for scientific journals: Nature, Science etc.

Languages

Italian	English	French
native	fluent (C1)	proficient (B2)

Experience

AI Lead Engineer — 3 months

2026-now

Sim & Cure (FR) — Medtech Industry

- Own end-to-end AI product for cerebral aneurysm detection & characterisation: R&D → deployment → clinical validation → iteration
- Drive **AI strategy** and contribute to product roadmap, translating clinical needs into development priorities
- **Lead a small ML team**: task definition / supervision / hands-on contributions
- Design and supervise full **ML pipeline**: data strategy, curation, research, training, evaluation, deployment
- Deliver *state-of-the-art* performance on small aneurysm detection in **real-world clinical settings** with real-time inference
- Integrate **continuous feedback** from clinical partners
- Introduced **AI agent-based workflows** to accelerate development
- Collaborate with regulatory and clinical teams on validation studies, technical documentation, and compliance (ISO/FDA)

Machine Learning Engineer — 3 years

2023-2026

Sim & Cure (FR) — Medtech Industry

- Developed AI tools for **neurological pathology** diagnosis and treatment
- Designed **deep learning** models (CNNs, GNNs) for vessel **segmentation / anomaly detection** in 3D medical imaging
- Built data processing and training pipelines for clinical imaging
- Pioneered **uncertainty quantification** and **explainable AI** at Sim&Cure
- **Improved** model robustness and performance, supporting adoption in hospitals worldwide
- Collaborated with developers, physicians, and regulatory experts ensuring clinical usability and health industry compliance (ISO/FDA)
- Leveraged **physics background** to devise creative solutions

Research scientist — 7 years

2023-2019

University of Strasbourg (FR) — Astrophysics domain

2019-2016

University of Groningen (NL) — Astrophysics domain

- [39 peer-reviewed papers](#), [9 code repositories](#), [5 data catalogs](#), 60+ talks
- Modelled vast astronomical data with **physics-informed ML** methods
- **Bayesian modelling** of tabular / image / time-series data from telescopes
- Extensive clustering, image processing, generative probabilistic models
- Critical thinking, scientific rigour, innovative solutions, explainable models
- **Highly influential** research output (h-index: 25, Mar 2026)
- Started a [deep learning blog](#), used in academic group meetings
- Used **HPC facilities** to perform computer simulations of galaxies
- **Mentored** multiple students, **organised** several international meetings
- Gave >20 seminars at international conferences (5 invited)

Ph.D. researcher — 3 years

2016-2012

University of Bologna (IT) — Astrophysics domain

- Pioneered new **generative models** of galaxies based on distribution theory
- Led international teams to successfully produce **scientific deliverables**
- Worked in prestigious institutes abroad for ~10 months (UK, USA)

Tech Stack

- Python, pytorch, Cursor AI, LLMs, scipy, pandas, VTK, ITK, monai, pyro, networkx
- C++, MPI/OpenMP, LaTeX, SQL, bash, CUDA