Lorenzo Posti

born: 16/10/1988 — Perugia (IT)

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Strasbourg (FR)

LinkedIn | ML blog | lposti | Scholar | Publications

About me

*Research scientist with a Ph.D. in astrophysics and 10+ years experience in **data science**, **machine learning**, creative modelling, **software** development, statistics, and **communication**.*

Seeking new challenges as a data scientist & eager to lend my research methodology to build together something new, for a better future for all.

Skills

Programming:

- **python**, jupyter, C++, SQL, LaTeX, bash, git
- **pytorch**, numpy, scipy, pandas, scikit-learn, numpyro
- CI/CD, MPI/OpenMP, ADQL

Technical:

- descriptive/predictive/generative/data driven modelling
- **machine learning**, **neural networks**, MCMC, autoencoders, diffusion models, gaussian processes
- project planning: ModelOps/MLOps, Agile/Scrum

Soft:

- positive attitude, constructive criticism
- worked in multi-cultural environments in 5 countries
- leadership & collaborative roles in teams
- public speaking, paper writing & reviewing

Languages

Italian — native language

English — fluent (C1/C2)

French — intermediate (B1/B2)

Other

Popular science articles: L'Astronomie Afrique, NOVA, Observatoire de Strasbourg

icons: flaticon.com

Experience

Research scientist — *7 years*

2023-2019 *University of Strasbourg (FR)*

2019-2016 *University of Groningen (NL)*

- 39 peer-reviewed papers, 9 code repositories, 5 data catalogs, 60+ talks
- Modelling large astronomical datasets with **machine learning** techniques
- Analysis of terabytes of data with Bayesian modelling
- PCA, deep NNs, image processing, VAEs, reinforcement learning
- Started a deep learning blog, used in internal group meetings
- **Leading** small international teams successfully producing research output
- **Mentoring** of students, **organisation** of international meetings

Ph.D. researcher — *3 years*

2016-2012 *University of Bologna (IT)*

- Pioneered new **generative models** of galaxies based on distribution theory
- Used **HPC facilities** to perform computer simulations of galaxies
- Worked in prestigious institutes abroad for ~10 months (UK, USA)

- I curate a deep learning blog, coding cutting-edge algorithms from scratch
- I taught classes of **python**, classical **machine learning**, and astronomy
- Over the years, I strived to stay up-to-date on the latest tech completing **numerous courses**: e.g. MPI/OpenMP, GPUs, pytorch, fast.ai

Education

2015-2012 Ph.D. in Astrophysics — *University of Bologna (IT)*
Thesis: *"On the luminous and dark matter distribution in early-type galaxies"*

2012-2010 M.Sc. in Astrophysics — *University of Bologna (IT)*
Grade: 110/110 *cum laude*

2010-2007 B.Sc. in Astrophysics — *University of Bologna (IT)*
Grade: 110/110 *cum laude*

Funding my Research

Grants awarded:

- CNES fellowship | Strasbourg (FR), 2019 — 50 k€
- Ph.D. fellowship | Bologna (IT), 2012 — 40 k€
- CNRS grant for conferences | Strasbourg (FR) — 10 k€
- Travel grants from IAU | Groningen (NL) — 4 k€

Computing & Telescope time awarded:

- 200 khr of computing time at CINECA HPC facilities
- 125 hr of observing time at the most competitive telescopes in the world

Honours & Prizes

- ISSNAF - **INAF prize** funding an internship at STScI, Baltimore (USA), 2011
- **Qualification** for lecturer in physics & astronomy, France, 2020
- **Invitation** as an expert panel **reviewer** for the Spanish Space Agency, 2020
- Reviewer for professional journals e.g. Nature, Astrophysical Journal