LORENZO CAVALLO
Data Scientist

CONTACT

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- 📍 Padova, Italy
- in Lorenzo Cavallo
- 🔭 Publication list

SKILLS

Programming
Python ●●●●●
Bash ●●●●○
Latex ●●●●○
Fortran ●●●○○

Operating Systems
Linux ●●●●●
MacOS ●●●○○
Windows ●●●●○

Software & Tools
Visualisation ●●●●●
(e.g. matplotlib, gnuplot, ...)
Data handling/analysis ●●●●●
(e.g. numpy, scipy, pandas, ...)
Statistics ●●●●●
(e.g. Emcee, pyMC, ...)
Machine Learnig ●●●●○
(e.g. Sklearn, TensorFlow, ...)
Neutral Networks ●●●●○
(e.g. ANN, CNN, RNN, ...)
Query ●●●○○
(e.g. ADQL, SQL, ...)
Version Control ●●●○○
(e.g. GIT, ...)
Office ●●●●○

Another skill subsection header
Mentoring/Supervising ★ Teaching ★ Data storytelling ★ Problem Solving ★ Critical Thinking ★ Team worker ★ Communicating ★ Leadership

Languages
Italian ●●●●●
English ●●●●○

Last updated on November 2024

👤 ABOUT ME

Data scientist with 3+ years of experience in academia and a deep background in astronomy/astrophysics. Strong Python coder with experience in parallel computing on CPU farms. Machine learning enthusiast with good expertise in the artificial neural network field. Proficient in Bayesian inference models. As a scientist, I have a lot of practical experience working with big datasets, theoretical and data-driven modelling, advanced statistical methods, and analysis pipelines to find my scientific answers. I am a curious learner and passionate communicator.

🚀 TECHNICAL SKILLS

- ⚙ Python expert. Wide experience with heavy codes and parallelisation
- ⚙ Proficient in advanced statistical tools with remarkable experience in Bayesian Inference tools. Proved experience in building hand-made problem-specific likelihoods and samplers.
- ⚙ Experienced user of query languages such as SQL and ADQL
- ⚙ Machine learning. Direct practical experience with SVM, Random Forest, Nearest Neighbors, HDBSCAN, k-means, CNN, and RNN. Great familiarity with ANNs both theoretical and practical, with a focus on physical-informed approaches.
- ⚙ Data handling (numpy and pandas) and manipulation (outliers detection, standardisation, data augmentation, etc.)
- ⚙ Data visualisation (matplotlib, seaborn)
- ⚙ Strong communication skills and team worker (also leadership oriented)

🎓 EDUCATION

- ★ 2024 - **PhD in Astronomy** (University of Padua, Italy)
- ★ 2020 - **MS in Astrophysics** (University of Trieste, Italy)
- ★ 2018 - **BS in Physics** (University of Trieste, Italy)

🏆 ACADEMIA ACHIEVEMENT

- 📄 I am the first author of 4 papers published in prestigious peer-reviewed scientific journals. Moreover, I also complete referee duties for the Astronomical Journal (AJ)
- 🎤 I presented my work at 4 international conferences and I held 3 seminars in high-level research institutes (INAF, Caltech, and Técnico Lisboa)
- 👥 3+ years of teaching and supervising experience. I hold 5 tutoring classes and supervise master students.