Francesco Di Salvo

✉ francesco.disalvo99@gmail.com   ⬤ francescodisalvo05.github.io   in francescodisalvo-pa

Research interests

Robust Machine Learning: To design robust, explainable, and generalizable algorithms capable of overcoming challenges posed by distribution shifts, out-of-distribution data, label noise, and inherent uncertainties.

Academic experience and education

Ph.D. in Machine Learning @ **University of Bamberg**	04/2023 - ongoing
working on Robust Machine Learning and generative models. Advisor: Christian Ledig.	*Bamberg, DE*
M.Sc. in Data Science and Engineering @ **Polytechnic University of Turin (109/110)**	09/2020 - 10/2022
with relevant courses: Mathematics in ML, Deep Learning, Statistical Methods in Data Science.	*Turin, IT*
Research Intern (Thesis) @ **Radboud University Medical Center**	03/2022 - 08/2022
working on Bayesian Uncertainty on 3D medical images. Advisors: Marco Caballo, Filippo Molinari.	*Nijmegen, NL*
B.Sc. in Computer Engineering @ **University of Palermo (with Honors)**	09/2017 - 07/2020
with relevant courses: C, Java, Software Engineering, Calculus, Linear Algebra.	*Palermo, IT*

Experience

Research Intern @ **NATO STO CMRE**	10/2022 - 03/2023
working on Anomaly Detection on underwater acoustic data. Advisor: Alessandra Tesei.	*La Spezia, IT*
Deep Learning Engineer Intern @ **AIKO Space**	10/2022 - 03/2023
working on Monocular Visual Odometry. Improved rotation error by 26%.	*Turin, IT*

Selected papers, more on [Google Scholar](#)

- An Embedding is Worth a Thousand Noisy Labels, **ArXiv'24**.
- Privacy-preserving datasets by capturing feature distributions with Conditional VAEs, **BMVC'24**.
- MedMNIST-C: Comprehensive benchmark with simulated realistic image corruptions, **MICCAI-W'24**.
- Self-supervised ViT are Scalable Generative Models for Domain Generalization, **MICCAI'24** (2nd author).

Awards and participation

Won *the Best Paper Award Runner Up @ ADSMI-MICCAI.*	*Marrakech, 10/2024*
Attended *the Mediterranean Machine Learning Summer School, hosted by Google and Google DeepMind.*	*Milan, 09/2024*

Talks

Privacy-aware and robust medical image analysis @ Imperial College London (BioMedIA)	*London, 10/2024*

Academic activity

- **Teaching assistant** for Mathematics in Machine Learning (2023-2024) and Robust Machine Learning (2023-2024).
- **Thesis supervisor**: $3\times$ Master's, $1\times$ Bachelor's.

Volunteering

Lead The Future. *Member of an Italian network of talents in STEM.*	*since 09/2023*
Omdena x Symbaiosys. *Volunteer Machine Learning Engineer for a forest restoration project (forecasting).*	*04/2021 - 06/2021*
Vivere Ingegneria. *Calculus tutor for engineering students and mentor for high school students.*	*09/2018 - 07/2020*

Programming and software skills ([GitHub](#))

Python (PyTorch, Pandas, NumPy, ScikitLearn, SciPy, Matplotlib), LaTeX, SQL, Git, Bash, Linux.

Languages

Italian (Native), English (Fluent).