Davide Scassola

PhD candidate

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Education

PhD, Applied Data Science & Artificial Intelligence

University of Trieste, Aindo srl

Jan 2023 - present | Trieste, Italy

Supervisor: Luca Bortolussi

Research subject: Controlling deep generative models with logical constraints, relational data generation

MSc, Data Science & Scientific Computing

University of Trieste, SISSA, ICTP

Sep 2018 - Dec 2020 | Trieste, Italy | 110L

Awards: Fellowship at SISSA (International School for Advanced Studies)

Thesis project: *"An Information-Theoretic Investigation Into Epigenetic Regulation of Gene Expression"*
Supervisors: Guido Sanguinetti (SISSA), Matteo Marsili (ICTP)

BEng, Computer Science

University of Brescia

Sep 2015 - Sep 2018 | Brescia, Italy | 110L

Areas of interest

Generative models, probabilistic machine learning, bayesian inference, software engineering.

Publications

"Multi-Objective reward generalization: Improving performance of Deep Reinforcement Learning for applications in single-asset trading." Neural Computing and Applications (2023): 1-19.

"Zero-Shot Conditioning of Score-Based Diffusion Models by Neuro-Symbolic Constraints." *AAAI* (2025).

Technical skills

Advanced: Python
Some experience: C, C++, Java, R
Other tools: NumPy, Pandas, PyTorch, Pyro, Tensorflow, SQL, Git, Linux, Excel, PowerPoint
Languages: English, Italian (native)

Hobbies

Playing bass, reading, football, tennis, bouldering, running, hiking.

Work Experience

University of Trieste / Teaching assistant / Jan 2024 - current | Trieste, Italy)

Teaching assistant for the Master's course in Probabilistic Machine Learning held by Luca Bortolussi: responsible for lecturing, correcting and writing course notes, preparing laboratories and exercitations, preparing and correcting homeworks.

Trality Gmbh / R&D Scientist / May 2021 - December 2022 | Vienna, Austria

Research and engineering for quantitative finance: time series modeling (cryptocurrencies), development of ML pipeline, reinforcement learning research, trading strategies optimization, implementation of statistical indicators and optimizers into production code, back-end development.

Deloitte Consulting / IT Analyst / Feb 2021 - Apr 2021 | Milan, Italy

Statistical analysis on datasets in the banking field, definition and implementation of automatic data quality controls, data governance solutions analysis in the banking field.

Aindo srl / Machine learning developer intern / Sep 2019 - Dec 2019 | Trieste, Italy

Development of a deep learning model able to generate multivariate financial time series simulating real dynamics and statistical properties.

Casa dello Studente / Tutor in Math, physics and computer science / Apr 2018 - Jun 2018 | Brescia, Italy