Piersilvio De Bartolomeis

⊕ pdebartol.github.io | ✉ pdebartol@ethz.ch | ♛ 12 November 1998 | ⌂ Zurich, Switzerland

Education

Eidgenossische Technische Hochschule (ETH) Zurich   **2023** – **present**
PhD in Computer Science   Zurich, Switzerland
- Advisors: Prof. Fanny Yang and Prof. Jonas Peters
- Research interests: robustness, causal inference, fairness, uncertainty quantification

Eidgenossische Technische Hochschule (ETH) Zurich   **2020** – **2022**
MSc in Data Science cum laude   Zurich, Switzerland
- Selected courses: Causality, Statistical Learning Theory, Mathematical Statistics, Reinforcement Learning, Advanced Machine Learning, Computational Biomedicine

Hong Kong University of Science and Technology   **2019**
Visiting Student in Computer Science   Hong Kong SAR
- Semester Project: Contributed to the development of an indoor localization system which is currently deployed on the university campus, under the supervision of Prof. Gary Chan

Politecnico di Milano   **2017-2020**
BSc in Computer Engineering cum laude   Milan, Italy
- Selected courses: Probability and Statistics, Mathematical Analysis I and II, Linear Algebra, Algorithms and Principles of Theoretical Computer Science

Publications and Preprints

[1] M. Mutti, R. D. Santi, **Piersilvio De Bartolomeis**, and M. Restelli. Challenging common assumptions in convex reinforcement learning. *Conference on Neural Information Processing Systems (NeurIPS)*, 2022.

[2] M. Mutti, R. D. Santi, **Piersilvio De Bartolomeis**, and M. Restelli. Convex reinforcement learning in finite trials. *Under submission to Journal of Machine Learning Research (JMLR)*, 2023.

[3] **Piersilvio De Bartolomeis**, J. Clarysse, F. Yang, and A. Sanyal. Certified defences hurt generalisation. *Workshop on Understanding Deep Learning Through Empirical Falsification at NeurIPS, **Oral***, 2022.

[4] **Piersilvio De Bartolomeis**, A. Orvieto, and G. Parascandolo. Enhancing unit-tests for invariance discovery. *Workshop on Spurious Correlations, Invariance, and Stability at ICML*, 2022.

Research Experience

Eidgenossische Technische Hochschule (ETH) Zurich   **2021** – **2022**
Research Intern   Zurich, Switzerland
- Advised by Prof. Cara Magnabosco and part of the Geobiology group
- Application of machine learning methods for the identification of protein secretion systems in bacterial genomes

Conference and Workshop Talks

Contributed Talk, Certified defences hurt generalisation   **2022**
Workshop on Understanding Deep Learning Through Empirical Falsification at NeurIPS   New Orleans, USA

Honors & Awards

1st place, Oracle GraphML Contest   Graph Machine Learning contest organised by Oracle Labs   **2020**

Full scholarship covering tuition and living expenses   **2019-2020**
Scholarship of 6000$ from Politecnico di Milano, awarded based on academic merit

Scholarship for undergraduate studies abroad   **2019**
Scholarship of 3000$ from Politecnico di Milano, awarded to students visiting an institution abroad

Best freshmen award   **2018**
Prize of 1500$ awarded to the best freshmen at Politecnico di Milano

Teaching Experience

Introduction to Machine Learning (1000+ students)   **2023**
Teaching Assistant   Zurich, Switzerland
- Instructors: Prof. Andreas Krause and Prof. Fanny Yang
- Designed homework assignments and conducted tutorial lectures

Machine Learning for Geobiology   **2021-2022**
Teaching Assistant   Zurich, Switzerland
- Instructor: Prof. Cara Magnabosco
- Designed homework assignments and a Kaggle competition as part of the final course project

Advanced Machine Learning   **2020**
- Instructors: Prof. Joachim Buhmann and Dr. Carlos Cotrini
- Co-authored lecture notes for the course (10+ ★)   Zurich, Switzerland

Volounteering

TEDxBattipaglia   **2023-present**
Organizer
- Organizing the first TEDx event in my hometown in southern Italy. Bringing together high-level Italian speakers to share their ideas and perspectives with the local community

LeadTheFuture   **2021-present**
Member
- LeadTheFuture is a non-profit mentoring organization and the largest merit-based STEM community in Italy. Currently, it counts more than 150 mentors, including researchers and entrepreneurs, and 500 selected mentees

Technical Skills

Programming Languages	C, Java, Python, R, SQL, LaTeX
Tools & Technologies	Git, JAX, PyTorch, SciKit, Pandas, NumPy, Spark
Languages	Native Italian, Fluent English, Beginner Japanese