Piersilvio De Bartolomeis

Education

ETH Zurich — **2023 – present**
PhD in Computer Science — Zurich, Switzerland
- Main advisor: Prof. Fanny Yang
- Second advisor: Prof. Jonas Peters
- Research interests: causal inference, treatment effect estimation, drug discovery

ETH Zurich — **2020 – 2022**
MSc in Data Science cum laude — Zurich, Switzerland
- Selected courses: Causality, Statistical Learning Theory, Mathematical Statistics, Reinforcement Learning

Hong Kong University of Science and Technology — **2019**
Visiting Student in Computer Science — Hong Kong SAR
- Advisor: Prof. Gary Chan
- Application of machine learning methods for an indoor localization system

Politecnico di Milano — **2017-2020**
BSc in Computer Engineering cum laude — Milan, Italy
- Selected courses: Probability Theory, Mathematical Analysis, Linear Algebra

Research Experience

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 Journal Publications

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

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

Fellowships & Awards

Ermenegildo Zegna Founder's Scholarship — **2023**
Scholarship of $5000 awarded to italian students visiting a leading institution abroad

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

Conference and Workshop Talks

Lightning Talk: "Hidden yet quantifiable: a lower bound for confounding strength using randomized trials" — **2023**
Workshop on Machine Learning for Health Care organized by Prescient Design & ETH AI Center — Zurich, CH

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

Academic Service

Conference reviewing

- NeurIPS 2023, ICLR 2024, AISTATS 2024

Workshop reviewing

- I Can't Believe It's Not Better Workshop (NeurIPS 2023)
- Pitfalls of limited data and computation for Trustworthy ML Workshop (ICLR 2023)

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 held 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 and 2023**
Teaching Assistant Zurich, Switzerland
- Instructors: Prof. Joachim Buhmann and Dr. Carlos Cotrini
- Designed homework assignments and held tutorial lectures
- Co-authored lecture notes for the course (10+ ★)

Volounteering

TEDxBattipaglia **2023-present**
Organizer
- Organizing the first TEDx event in my hometown, bringing together high-level Italian speakers to share their ideas and insights with the local community

LeadTheFuture **2021-present**
Mentor
- 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