

# Piersilvio De Bartolomeis

[🏠 Personal Website](#) | [🎓 Google Scholar](#)

## Education

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### Eidgenössische Technische Hochschule (ETH) Zurich

PHD IN COMPUTER SCIENCE

**2023 – present**

Zurich, Switzerland

- Advisors: Prof. Fanny Yang and Prof. Jonas Peters
- Research interests: robustness and causal inference

### Eidgenössische Technische Hochschule (ETH) Zurich

MSC IN DATA SCIENCE CUM LAUDE

**2020 – 2022**

Zurich, Switzerland

- Selected courses: Causality, Statistical Learning Theory, Mathematical Statistics, Reinforcement Learning

### Hong Kong University of Science and Technology

VISITING STUDENT IN COMPUTER SCIENCE

**2019**

Hong Kong SAR

- Advisor: Prof. Gary Chan

### Politecnico di Milano

BSC IN COMPUTER ENGINEERING CUM LAUDE

**2017-2020**

Milan, Italy

- Selected courses: Probability and Statistics, Mathematical Analysis, Linear Algebra, Algorithms and Principles of Theoretical Computer Science

## Publications and Preprints

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- [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.
- [3] **Piersilvio De Bartolomeis**, J. Clarysse, A. Sanyal, and F. Yang. How robust accuracy suffers from certified training with convex relaxations. arXiv preprint, 2023.
- [4] **Piersilvio De Bartolomeis**, A. Meterez, Z. Shu, and B. D. Stoker. An effective machine learning approach for predicting ecosystem CO<sub>2</sub> assimilation across space and time. EGU sphere preprint, 2023.

## Research Experience

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### Eidgenössische Technische Hochschule (ETH) Zurich

RESEARCH INTERN

**2021 – 2022**

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

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**Contributed Talk:** "Certified defences hurt generalisation"

Workshop on Understanding Deep Learning Through Empirical Falsification at NeurIPS

**2022**

New Orleans, USA

## Fellowships & Awards

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### Ermenegildo Zegna Founder's Scholarship

Scholarship of 5000\$ awarded to Italian students visiting a leading institution abroad

**2023**

### Full scholarship covering tuition and living expenses

Scholarship of 6000\$ from Politecnico di Milano, awarded based on academic merit

**2019-2020**

### Scholarship for undergraduate studies abroad

Scholarship of 3000\$ from Politecnico di Milano, awarded to students visiting an institution abroad

**2019**

### Best freshmen award

Prize of 1500\$ awarded to the best freshmen at Politecnico di Milano

**2018**

## Teaching Experience

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<b>Introduction to Machine Learning</b> (1000+ students)	<b>2023</b>
TEACHING ASSISTANT	Zurich, Switzerland
<ul style="list-style-type: none"><li>• Instructors: Prof. Andreas Krause and Prof. Fanny Yang</li><li>• Designed homework assignments and held tutorial lectures</li></ul>	
<b>Machine Learning for Geobiology</b>	<b>2021-2022</b>
TEACHING ASSISTANT	Zurich, Switzerland
<ul style="list-style-type: none"><li>• Instructor: Prof. Cara Magnabosco</li><li>• Designed homework assignments and a Kaggle competition as part of the final course project</li></ul>	
<b>Advanced Machine Learning</b>	<b>2020</b>
<ul style="list-style-type: none"><li>• Instructors: Prof. Joachim Buhmann and Dr. Carlos Cotrini</li><li>• Co-authored <a href="#">lecture notes</a> for the course (10+ ★)</li></ul>	Zurich, Switzerland

## Academic Service

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### Conference reviewing

- NeurIPS 2023

### 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)

## Volunteering

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<b>TEDxBattipaglia</b>	<b>2023-present</b>
ORGANIZER	
<ul style="list-style-type: none"><li>• Organizing the first TEDx event in my hometown, bringing together high-level Italian speakers to share their ideas and insights with the local community</li></ul>	
<b>LeadTheFuture</b>	<b>2021-present</b>
MENTOR	
<ul style="list-style-type: none"><li>• 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</li></ul>	

## Technical Skills

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<b>Programming Languages</b>	C, Java, Python, R, SQL, $\text{\LaTeX}$
<b>Tools &amp; Technologies</b>	Git, JAX, PyTorch, SciKit, Pandas, NumPy, Spark
<b>Languages</b>	Native Italian, Fluent English, Beginner Japanese