Davide Maran, Ph.D. Student

Experience

June 2025 – Aug 2025 — **Quant Researcher, G-Research.** Summer internship. Worked with a large (≈ 1TB) market dataset from 12 stock universes to optimize trade execution strategies. The project involved reinforcement learning, control theory, and market impact modeling. Gained experience running large-scale experiments on a high-performance computing cluster.

Feb 2025 – May 2025 — **Adjunct Lecturer, Politecnico di Milano.** Course: Probability and Statistics.

Sept 2024 – Jan 2025 — **Research Assistant, University of Alberta.** Supervisor: **Prof. Csaba Szepesvári**.

Jan 2022- Oct 2022 — **Research Fellow, Politecnico di Milano.** DEIB (Department Electronics Computer Science and Engineering).

Education

2022 – now — **Ph.D. Machine Learning, Politecnico di Milano.**
Supervisor: **Prof. Marcello Restelli**. Research topics: *Reinforcement Learning, Statistical Learning Theory, Representation Learning and Nonparametric Statistics.*

2019 – 2021 — **M.Sc. Mathematical Engineering, Politecnico di Milano.**
Final grade: **110 cum laude/110**
Thesis title: *Delayed Reinforcement Learning, an Imitation Game*.

2016 – 2019 — **B.Sc. Mathematical Engineering, Politecnico di Milano.**
Thesis title: *Condition number of random matrices with i.i.d. rows*.

Research Publications

Eleven first-author or co-first-author publications in top conferences (3× NeurIPS, 2× ICML, 2× AAAI, 2×AISTATS, COLT) and journals (S&PL). **Research interests include:** Reinforcement Learning, Stochastic optimization, Nonparametric statistics. **Selected pubblications**:

1. **Davide Maran**, Csaba Szepesvári. Beyond Least Squares: Uniform Approximation and the Hidden Cost of Misspecification. Proceedings of the 39th Conference on Neural Information Processing Systems **(NeurIPS)**, 2025.

2. **Davide Maran**, Alberto Maria Metelli, Matteo Papini and Marcello Restelli. Local Linearity: the Key for No-regret Reinforcement Learning in Continuous MDPs. Proceedings of the 38th Conference on Neural Information Processing Systems **(NeurIPS)**, 2024.

3. Pierre Liotet*, **Davide Maran***, Lorenzo Bisi and Marcello Restelli. Delayed reinforcement learning by imitation. Proceedings of the 39th International Conference on Machine Learning **(ICML)**, 2022.

Skills

Languages — Italian (native), English (fluent).

Coding — Python (NumPy, Pandas, SciPy, Scikit-learn and many others), MATLAB, C/C++, R, SQL (basic), Docker (basic).

ML Frameworks — PyTorch, TensorFlow, Jax, StableBaselines.

Tools. — Git, LaTeX, VS Code, Jupyter, LaTeX.