

# Francesco Stranieri

PHD STUDENT · ITALIAN NATIONAL PHD PROGRAM IN ARTIFICIAL INTELLIGENCE

frenkowski@gmail.com | frenkowski.it/ | linkedin.com/in/frenkowski/ | github.com/frenkowski/ | Google Scholar

“An expert is a person who has made all the mistakes that can be made in a very narrow field.” – Niels Bohr

## Experience

### **Bristol Myers Squibb, External Researcher** | Zurich, Switzerland

April 2023 - Present

- Developed and implemented a digital twin for supply chain risk evaluation using deep reinforcement learning.
- Demonstrated an improvement in inventory management for perishable pharmaceuticals over human-managed policies.

### **IEEE-HKN, AI Team Member** | Turin, Italy

March 2022 - Present

- Collaborated with a four-person team to build a dataset and develop a CNN-based image classification model.
- This model aims to categorize different types of waste, enhancing automation in waste collection at the Polytechnic of Turin.

### **University of Milano-Bicocca, Tutor** | Milan, Italy

September 2019 - September 2023

- Worked as a Tutor for the course 'Operations Research and Resource Planning' (MAT/09 – 40 hours) in the a.y. 2021/22 and 2022/23.
- Worked as a Tutor for the courses 'Design and Analysis of Algorithms' (INF/01 – 60 hours), 'Probability and Statistics for Computer Science' (MAT/06 – 30 hours), 'Operating Systems and Networks' (INF/01 – 60 hours) in the a.y. 2019/20.

### **ITS Angelo Rizzoli, Professor** | Milan, Italy

September 2020 - July 2022

- Led and taught the 'Programming Language for Machine Learning' module, focusing on the R programming language, for the 'ITS Machine Learning Specialist' course during the a.y. 2020/21 (24 hours) and 2022/23 (32 hours).

### **AnciLab, Extracurricular Internship** | Milan, Italy

January 2021 - May 2021

- Selected for an intensive 258-hour program for young entrepreneurs designed to provide participants with essential skills for developing business ideas through training sessions, local business interactions, and a focus on teamwork and communication tools.

**Invited Speaker:** "ReGAIoS: Ridurre il Divario tra AI e Società" (Milano Digital Week 2023) | "The Rights from Future Generations: an Initiative about Generative AI" (MTSR 2023) | "An Introduction to Reinforcement Learning and an Application to the Inventory Management Problem" (Technoprobe SpA – 2023) | Operations Research and Resource Planning (UniMiB BSc Course – 2023) | Operational Research: Theory and Applications (PoliTo MSc Course – 2022)

**Memberships:** IEEE - Institute of Electrical and Electronics Engineers (Young Professionals Member – 2022) | AlxIA - Italian Association for Artificial Intelligence (Member – 2020) | ADI - Italian Association of PhD Candidates and PhDs (Member – 2021) | MADLab - Models and Algorithms for Data and Text Mining (Member – 2019) | RipetHub APS (Founder and President – 2020)

## Education

3rd Year **PhD in Artificial Intelligence (Industry 4.0)**, Polytechnic of Turin | Turin, Italy

2021-Present

**Awards:** 2nd Prize @ Best Student Research "Video & Poster Competition" (IEEE EUROCON 2023) | \$150 Award @ Poster Competition (M2L 2022) | University Scholarship (University of Milano-Bicocca 2016, 2017, 2018, 2019, 2020)

**International Conferences:** AlxIA 2023 (Oral Paper Presentation) | ECML PKDD 2023 (Oral Paper Presentation) | POMS 2023 (Attendee) | IEEE EUROCON 2023 (Poster Presentation) | AYW 2023 (Attendee) | EWRL 2022 (Poster Presentation) | PGBH 2021 (Attendee) | AlxIA 2021 (Attendee) | AlxIA 2020 (Attendee) | MDAI 2019 (Local Organizing Committee)

**International Summer Schools:** International Society for Inventory Research (ISIR) Summer School 2023 (Cardiff University) | Mediterranean Machine Learning (M2L) Summer School 2022 (University of Milano-Bicocca)

**Courses:** Advanced Deep Learning Models and Methods (PoliMi) | Reinforcement Learning (PoliMi) | An Introduction to Optimization over Time and its Application to Online Machine Learning and Reinforcement Learning (UniGe) | Integer Programming and Combinatorial Optimization (UniPv) | Modeling and Problem Solving with Stochastic Programming (PoliTo) | Industry 4.0 and the Industrial Internet of Things: Challenges and Enabling Technologies (UniBo)

110/110L **MSc Degree in Computer Science (LM-18)**, University of Milano-Bicocca | Milan, Italy

2019-2021

110/110L **BSc Degree in Computer Science (L-31)**, University of Milano-Bicocca | Milan, Italy

2016-2019

## Skills

**Projects:** A list of selected projects is available on GitHub.

**Programming:** Python, R, MATLAB, Java, C/C++, Git, LaTeX

**Certificates:** 24 CFU for Teaching (2022) | iBicocca Silver (University of Milano-Bicocca – 2020) | Probabilistic Graphical Models - Specialization (Stanford University – 2020) | Introduction to Data Mining - Pathway (University of Milano-Bicocca – 2019) | Database, Analytics & Management (Amazon Web Services – 2019) | Elements of AI (University of Helsinki – 2018) | Fundamentals of Digital Marketing (Google – 2018) | Samsung Innovation Camp (Samsung – 2018) | Cisco CCNA - Routing and Switching (Cisco – 2016)

## Languages

**Italian** Native

**English** Professional Working Proficiency

## Publications

[1] **Stranieri, F., Stella, F.,** *A deep reinforcement learning approach to supply chain inventory management*, 2022. DOI: 10.48550/ARXIV.2204.09603. URL: <https://arxiv.org/abs/2204.09603>.

[2] Ruggieri, A., **Stranieri, F., Stella, F., Scutari, M.,** "Hard and soft EM in bayesian network learning from incomplete data," *Algorithms*, vol. 13, no. 12, p. 329, Dec. 2020. DOI: 10.3390/a13120329. URL: <https://doi.org/10.3390/a13120329>.