Leonardo Tonelli

leonardotonelli03@gmail.com | LinkedIn | Personal Website | GitHub

EDUCATION

EPFL - École Polytechnique Fédérale de Lausanne — Lausanne, Switzerland — Sept 2025 - Present
Title: MSc. in Statistics
Expected Coursework: Statistical Computation, Statistical Inference, Mathematics of Data, Statistical Machine Learning, Deep Learning, Deep Reinforcement Learning

BOCCONI UNIVERSITY — Milan, Italy — Sept 2022 – July 2025
Title: BCs in Economics, Management and Computer Science
Final Mark: 110/110 Cum Laude
Thesis: *"Navigating Complex Energy Landscapes: Replicated Approach to the Binary Perceptron"* (supervised by Prof. Saglietti)
Scholarships: National scholarship "Fondo Previdenza Mef " (2000€) based on academic merit (1st year of study)
Relevant coursework: Advanced Statistics, Econometrics, Applied Mathematics, Machine Learning, Computer Programming, Computer Science, Big Data and Databases, Game Theory, Finance, Microeconomics, Macroeconomics.

NANYANG TECHNOLOGICAL UNIVERSITY SINGAPORE — Singapore, Jan 2025 – May 2025
Title: Exchange Student in Business & Computing programme
90th percentile over 1179 exchange undergraduate winning applicants' scores.
Relevant coursework: Business Analytics consulting, Signal and Noise in Biology and Intelligent Agents

PROFESSIONAL EXPERIENCES

RESEARCH ASSISTANT – *Bocconi University* — Milan, Italy — Sept 2024 – Dec 2024
- Statistical analyses on RCT experimental data combining survey and eye tracking.
- Experiment size: ~1200 participants, ~1M raw eye tracking observations.
- Current research Professors: Maria Cucciniello and Alessandro Romano (Law and Political Sciences Departments)
- **Statistics**: ANOVA, regularisation, GLM. **Programming language**: Python (pandas, statsmodels, scipy)

AI SOLUTIONS DEVELOPER – *Obloo Ventures,* Venture Capital and Private Equity (150M AUM) — Milan, Italy — Jun - Sept 2024
- Developed application that transcribes, summarizes and extracts key topics from audio files.
- Boosted note-taking efficiency by 70% and 3x value extracted from meetings, as reported by analysts.
- Assisted in implementing and testing RAG architecture on a NAS system.
- **Programming**: Docker, Streamlit, Groq, Hugging Face, Git

SELECTED PROJECTS

Credit Scoring Analysis
Description: led a study for Machine Learning course, comparing variations of ML algorithms for predicting credit card default, with a focus on dataset imbalance. Conducted research grounded in analysis of 10+ academic papers, exploring diverse algorithmic approaches.
Acquired skills: scikit-learn, research synthesis, data preparation, resampling, weighted models, feature engineering.

Playing ATARI with DQN
Description: coordinated a group of 3 (for Hephaestus AI Bocconi association) in replicating from scratch the architecture from *Mnih et al.*'s landmark paper, "Playing Atari with Deep Reinforcement Learning" (2013).
Acquired skills: PyTorch, RL theory, DQN architecture, gymnasium environment, leadership in research, professional writing.

IT SKILLS

- **Python**: intermediate (libraries: Pandas, PyTorch, Spacy, NumPy, SciPy, Seaborn, Matplotlib, scikit-learn, statsmodels)
- **R**: intermediate (Bocconi University statistics course, 30/30, 2022/2023 and Econometrics course, 28/30, 2023/2024)
- **SQL**: intermediate (Bocconi course, 30 cum laude out of 30)
- **Git**: intermediate (professional experience)
- **Latex**: intermediate (academic experience)

LANGUAGES

Italian: Native	English: Advanced (IELTS C1 band 8, 2024)	French: Beginner (Bocconi course for B1)	Spanish: Beginner

UNIVERSITY ASSOCIATIONS

- **Hephaestus Applied AI –** *Research Project Head*
- **Bocconi Students for Machine Learning –** *Research Member*
- **BSI Bocconi –** *Project Leader*
- **AI & Neuroscience Student Association –** *Member*

EXTRACURRICULARS

University certifications: Advanced Excel, Introduction to MATLAB, Quantum Physics educational seminar | **Italian Olympiad Semi-finalist |** Secured paid participation to **Hackathon Junction 2023** in Helsinki | **Drums player** for 6 years, played in public in several occasions, both solo and in group | AVIS **blood donor** | **Sports**: basketball player, MTB and road cycler, skier, snowboarder | **Interests**: Philosophy, History, Hiking.