

Tommaso Baroni

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EXPERIENCE

Data Scientist Intern

Nov. 2024 – May 2025

Deix Srl, Milan

- Co-led development of a Transformer-based Credit Risk Model (AUC 0.89) for a European rating agency, building pipelines for 300K+ companies data and using attention-score analysis for interpretability
- Implemented a multi-agent RAG system with LangGraph and developed the FastAPI/SQLAlchemy/PostgreSQL credit-management API
- Extended an internal tsfresh-based Python library to automate time-series quality checks on InfluxDB data, adding anomaly detection and seasonal-pattern analysis

Master Thesis Student

Feb. 2024 – Oct. 2024

Ericsson, Stockholm

- Developed a Transformer-based time-series model for power-amplifier signals, designing custom embeddings to capture historical patterns and memory effects
- Surpassed RNN benchmarks by 2.3%, matching performance of Ericsson's proprietary solutions

EDUCATION

Double MSc, Data Science & Computer Engineering

Sep. 2022 – Apr. 2025

Politecnico di Milano & U. Politécnica de Madrid

GPA: 105/110

- **Selected Coursework:** Machine Learning, Deep Learning, Algorithms & Data Structures, Software Engineering, Data Mining & Time Series

BSc, Automation Engineering

Sep. 2019 – Sep. 2022

Politecnico di Milano

GPA: 105/110

- **Selected Coursework:** Robotics, Operations Research, Probability and Statistics

PROJECTS

Spark-Optimized Parallel ML Algorithms

Sep. 2023 – Jan. 2024

- Implemented parallel Logistic Regression and K-Means pipelines in PySpark, using only low-level Spark RDD transformations for data ingestion, normalization, gradient-descent training, accuracy computation, and cross-validation
- Benchmarked scalability (1–4 cores) on botnet traffic classification and MNIST clustering, achieving near-linear speedup and visualizing performance, convergence and evaluation-metric curves

Java-Based Multiplayer Board Game Development

Feb. 2023 – Jun. 2023

- Worked in a team of four to create a digital Java adaptation of *MyShelfie* by Cranio Creations, featuring a client-server architecture, a JavaFX-based GUI, a CLI interface, and testing with JUnit
- Utilized socket programming and Remote Method Invocation (RMI) for multiplayer functionality

TECHNICAL SKILLS

Languages: Python, SQL, Java, C, MATLAB

Frameworks & Libraries: PyTorch, scikit-learn, PySpark, LangChain, SQLAlchemy, FastAPI, pandas, NumPy

Databases: PostgreSQL, MySQL, InfluxDB

Tools & DevOps: Git, Docker, Linux, GitHub Actions, VS Code