Pietro Bonardi

< Machine Learning Engineer / Data Scientist>

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About me.
Applied Machine Learning Engineer with 3+ years of experience building production ML systems, risk models and scalable MLOps pipeline in the financial industry. [personal-website]

Work Experiences.

ML Engineer | Data Scientist @ ING
Milan, IT
11/2022 – Present
- Architected a **ML framework** for data science projects across ING. It includes a **feature creation engine** that significantly accelerates model development cycles and ensures high code quality. Adopted by **10+ engineers** across multiple projects.
- Built and deployed an **early warning signal system** to predict **delinquencies across ING products**. Fully automated via Airflow, enabling continuous alerting at-risk accounts. This led to a **40% increase in recovery rates**.
- Led internal **Python for Data Science course**, successfully **training 20+ professionals per cohort**.
- Developed a standardized **Streamlit-based monitoring tool**, able to generate reports. Nearly **automates all** monitoring tasks.
- Engineered a scalable ML pipeline enabling ING to provide **an always on pre-approved loan offer** for customers. Bringing a **2x YoY increase in loan disbursement**.

Tools. PySpark | MLflow | Airflow | Optuna | AWS | Bash | CI/CD Pipelines | Streamlit

Data Science intern @ Fastweb
Milan, IT
03/2021 – 11/2021
- Developed a machine learning classifier designed to **drive remuneration processes** by predicting salary bands.
- Applied **explainable AI** analysis to ensure model interpretability for business stakeholders.

Tools. Python | MySQL | SHAP | PowerBI

Research Engineering intern @ University of Brescia
Brescia, IT
10/2018 – 03/2019
- Conducted research on Bluetooth Low Energy protocol.
- Implemented a sniffer on a semiconductor board able to **debug BLE connection**. Reduced the cost by 60% compared to proprietary alternatives.

Tools. C | Bash | Linux | Computer Network

Publication.

Introduction to Quantum Machine Learning
- Authored a peer-reviewed publication explaining foundational quantum ML concepts (QRAM, Grover) and advanced algorithm for applied machine learning researcher. [Paper]

Tools. QML | Latex

Education.

Master of Science in Data Science
Feb. 2022
@ University of Milano-Bicocca
Main Courses. Machine & Deep Learning | Probability & Statistics | Statistical Modelling

Bachelor of Science in Computer Science & Engineering
Oct. 2019
@ University of Brescia
Courses. Software Engineering | Linear Algebra | Calculus | Operating System | Physics

Projects.

Galgo Genetic Algorithm
- An open-source implementation of the genetic algorithm. Designed to provide a flexible and easily integrable interface for various applications. [Link]

<\>. Open-source | Python | Object Oriented Programming

Path Finder
- Implemented a simple **visualisation tool** for **shortest path algorithms** (DFS, BFS, etc.) with the aim of delving more deeply into the study of DSA & Graphs. [Link]

<\>. Python | Data Structure & Algorithms | Graph