Pietro Bonardi

in linkedin.com/in/pietrobonardi   github.com/pietrobonardi   @ pietrobonardi@icloud.com   +39 333 955 2966
https://pietrobonardi.github.io

Work Experiences

Present **Nov. 2022**	**Machine Learning Engineer, ING, Milan** • Architected an internal software library serving as the **foundational framework** for data science projects across ING. The solution includes a feature engine which dramatically accelerates model development cycles. Adopted by **10+ developers** across two projects, accelerating delivery and ensuring high code quality. • Developed and implemented an early warning signal model to predict **delinquencies across all ING products**. The solution was fully automated and orchestrated via Airflow DAG, enabling continuous monitoring and alerting of at-risk accounts. This led to a **40% increase in recovery rates**, significantly enhancing the efficiency of collection team actions. • Created a custom interactive dashboard using Streamlit for **model monitoring**, able to generate reports. Adopted as the standard, it **automates almost 100%** of the monitoring tasks. • Engineered a scalable ML pipeline enabling ING to provide **an always on pre-approved loan offer** for customers. Designed a modular, parameterizable system to support changing business needs. This solution delivered a **2X increase in loan disbursement** year-over-year. • Designed and delivered a **Python for Data Science** course for ING risk area, successfully **training 20+ professionals per cohort**. Enhanced technical capabilities and accelerated the adoption of data science practices across the organization. PySpark Airflow MLFlow Optuna Streamlit AWS Bash CI/CD Pipelines
Nov. 2021 **Mar. 2021**	**Data Science intern, Fastweb, Milan** • Trained a machine learning classifier designed to **drive remuneration processes** by predicting salary bands. Performed explainable AI analysis to make the tool interpretable also by non-expert. Python SQL SHAP PowerBI
Mar. 2019 **Oct. 2018**	**Research Engineering intern, Computer Science Department, University of Brescia** • 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. C Bash Linux Computer Network

Publication

Introduction to Quantum Machine Learning

  Springer Nature/QML
Explaining foundational concepts of quantum machine learning (QRAM, Grover, HHL) and advanced algorithms (quantum SVMs, neural networks).

Quantum Machine Learning

Education

Feb. 2022	**Master of Science, Data Science, University Milan-Bicocca** *Main Courses: Probability & Statistics	Machine & Deep Learning	Statistical Modelling*
Oct. 2019	**Bachelor of Science, Computer Science & Engineering, University of Brescia** *Main Courses: Software Engineering	Linear Algebra	Calculus	Operating System	Physics*

Projects

GALGO Genetic Algorithm

  github.com/pietrobonardi/galgo
An open-source implementation of the genetic algorithm. Designed to provide a flexible and easily integrable interface for various applications

Open-source Python Object Oriented Programming

How Tube Popular

  github.com/pietrobonardi/How-Tube-Popular
  Visualization
Collected a high volume of data and implemented an architecture for distributing data across multiple machines via MongoDB.

MongoDB Azure Platform Tableau Python Git