





Pietro BONARDI

 [linkedin.com/in/pietrobonardi](https://www.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 <ul style="list-style-type: none">Developed an early warning signal model able to predict breaches across all products within the bank, resulting in the bank's most wide-ranging model, capable of processing over 1 million active products. Currently managing the production transition by implementing automated pipeline for testing & code deployment and creating a scheduler to automatically orchestrate the runs.Engineered production-ready ML workflows capable of processing over 100 million transactions monthly. Established an Airflow scheduler to automate the process, enabling the business to double loan disbursement year over year.Improved team development processes by developing a centralized library of blueprints that encompass: spark processor, feature creation, selection steps and model selection. Achieved 85% test coverage ensuring a reliable code base.Created a custom interactive dashboard using Streamlit for model monitoring, able to generate reports and slideshow. Adopted as the standard, it automates almost 100% of the tasks. <div><div>PySpark</div><div>Airflow</div><div>MLFlow</div><div>Optuna</div><div>Streamlit</div><div>AWS</div><div>Bash</div><div>CI/CD Pipelines</div></div>
Nov. 2021 Mar. 2021	Data Science intern, FASTWEB, Milan <ul style="list-style-type: none">Conducted ad-hoc statistical analyses to overview compensation policies and created a PowerBI dashboard, boosting HR team efficiency in exploring salary data by 50%.Trained a ML classifier designed to drive remuneration processes by predicting salary bands. Performed explainable AI analysis to make the tool interpretable also by non-expert. <div><div>Python</div><div>SQL</div><div>SHAP</div><div>PowerBI</div></div>
Mar. 2019 Oct. 2018	Research Engineering intern, COMPUTER SCIENCE DEPARTMENT, University of Brescia <ul style="list-style-type: none">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. <div><div>C</div><div>Bash</div><div>Linux</div><div>Computer Network</div></div>

EDUCATION

Feb. 2022	Master of Science, DATA SCIENCE, University Milan-Bicocca <i>Main Courses: Machine & Deep Learning Computer Vision Data Management Statistical Modelling Probability & Statistics</i> > Organized relevant core lectures with LaTeX. [Notes]
Oct. 2019	Bachelor of Science, COMPUTER SCIENCE & ENGINEERING, University of Brescia <i>Main Courses: Software Engineering Calculus 1-2 Physics 1-2 Linear Algebra Operating System</i>

PROJECTS

INTRODUCTION TO QUANTUM MACHINE LEARNING (QML)

 Springer Nature Technology

Investigated and redacted an introduction for non practical reader to the growing QML field. The project later became a peer-reviewed paper published in late 2021.

Quantum Machine Learning

Machine Learning

LaTeX

Python

GALGO GENETIC ALGORITHM

 github.com/pietrobonardi/galgo

Developed GALGO, an open-source implementation of the genetic algorithm. Designed to provide a flexible and easily integrable interface for various applications. Continuously enhancing the evolutionary algorithm steps to improve performance and efficiency.

Open-source

Python

Object Oriented Programming

HOW TUBE POPULAR

 github.com/pietrobonardi/How-Tube-Popular  Visualization

Data analysis on YouTube most popular videos. Collected a high volume of data and implemented an architecture for distributing data across multiple machines via MongoDB.

MongoDB

Azure Platform

Tableau

Python

Git

SKILLS

Data Science & Machine Learning	PySpark MLFlow Scikit-learn Shap Optuna Feature-Engine
DevOps & Cloud	GitHub Airflow Docker AWS (S3) Azure DevOps Bash
Data Visualization & BI	Streamlit Superset
Languages	Python Java C LaTeX
Databases	SQL NoSQL