

Pietro BONARDI

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WORK EXPERIENCES

Present Nov. 2022	Machine Learning Engineer, ING, Milan <ul style="list-style-type: none">Developed an “Early Warning Signal” model aimed at predicting breaches on products. Significantly optimizing the development process by creating a reusable code-template for ML models. This template includes comprehensive functionalities for feature creation, selection, algorithm selection, and model training, standardizing the workflow.Engineered production-ready ML workflows capable of pre-processing over 100mln transactions to identify eligible loan customers. Instantiated a scheduler using Airflow to orchestrate the underlying code. This resulted in a doubling of loans disbursed from year to year.Created a custom interactive dashboard using Streamlit for model monitoring, able to generate reports and slideshow. Now standard for the monitoring, it automatised the activities by almost 100%. <div><div>PySpark</div><div>Airflow</div><div>MLFlow</div><div>Optuna</div><div>Streamlit</div><div>Feature-engine</div><div>AWS</div><div>CI/CD Pipelines</div></div>
Nov. 2021 Mar. 2021	Data Science intern, FASTWEB, Milan <ul style="list-style-type: none">Crafted a PowerBI dashboard, enhancing Human Resource team efficiency in exploring the salaries database by 50%.Trained an XGBoost classifier designed to drive remuneration processes by predicting salary bands, with 75% of F1-score. Used SHAP to make the tool interpretable also by non-expert. <div><div>Python</div><div>SQL</div><div>PowerBI</div><div>XAI</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 <p><i>Main Courses: Machine & Deep Learning Computer Vision Data Management Statistical Modelling Probability & Statistics</i></p> <ul style="list-style-type: none">Organized core lectures with LaTeX. [Notes]Final Score: 110/110
Oct. 2019	Bachelor of Science, COMPUTER SCIENCE & ENGINEERING, University of Brescia <p><i>Main Courses: Software Engineering Calculus 1-2 Physics 1-2 Linear Algebra Operating System</i></p> <ul style="list-style-type: none">Final Score: 92/110

PROJETS

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.

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