

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>PySpark Airflow MLFlow Optuna Streamlit Feature-engine AWS CI/CD Pipelines</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>Python SQL PowerBI XAI</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>C Bash Linux Computer Network</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> <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 <i>Main Courses: Software Engineering Calculus 1-2 Physics 1-2 Linear Algebra Operating System</i>

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