Paolo Chignoli

AI Engineer & Data Scientist | MSc in Physics

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📍 Milan, Italy (Open to Remote)

PROFESSIONAL PROFILE

AI Engineer and Data Scientist with a Master's degree in Physics and 3+ years of experience. I combine strong analytical skills to derive insights from complex data with engineering expertise to build scalable AI solutions. Proven track record in MLOps, Generative AI (RAG), and predictive modeling within Industrial Automation and Consultancy sectors. Skilled in migrating legacy systems to modern cloud architectures and deploying production-grade LLM applications.

PROFESSIONAL EXPERIENCE

Fortil Group (Consultant for Coesia) *Remote / Bologna, Italy*
AI Engineer & Data Scientist Sep 2025 – Present

- Consultant for **Coesia** (Industrial Automation & Packaging), designing advanced AI architectures.
- Building **GraphRAG systems** using **LangGraph** and **Neo4j** to enhance knowledge retrieval for industrial processes.
- Engineered scalable Machine Learning pipelines for predictive maintenance, targeting high-frequency sensor data.
- Managing MLOps workflows to ensure continuous integration and deployment of models in production.
- **Stack:** Python, LangGraph, Neo4j, OpenAI API, Docker, Azure, AWS.

JAKALA *Milan, Italy*
Data Scientist Mar 2024 – Sep 2025

- **Led the migration of data infrastructure from SAS to Python**, refactoring legacy codebases and improving workflow execution time by **25%**.
- Developed and deployed Machine Learning models for Churn Prediction and Customer Value Management.
- Optimized large-scale data processing pipelines using PySpark and SQL on cloud environments.

Boolean *Milan, Italy (Remote)*
Data Analytics Instructor Jan 2024 – Present

- Instructing classes of 30+ students on Python, SQL, and Machine Learning, achieving a **95% student satisfaction rate**.
- Designing practical coding labs and mentoring students on best practices for data engineering and analysis.

Grandi Stazioni Retail *Milan, Italy*
Data Scientist Sep 2023 – Mar 2024

- Managed end-to-end data lifecycles: from raw data cleansing to KPI extraction for retail monitoring.
- Designed interactive dashboards using Tableau and Power BI to support executive decision-making.

Avvale *Milan, Italy*
Data Scientist & Computer Vision Engineer Jul 2022 – Sep 2023

- **Developed and deployed an AWS-based Computer Vision system** for textile defect detection, automating quality control.
- Implemented Deep Learning models (TensorFlow/Keras) for image classification and object detection.
- Led NLP initiatives to extract actionable insights from unstructured customer ticketing data.

TECHNICAL SKILLS

- **Languages:** Python, SQL, C++, R, Java, Bash/Shell.
- **GenAI & LLMs:** LangGraph, LangChain, RAG, Neo4j (Graph DB), OpenAI API, Hugging Face, Vector DBs.
- **Machine Learning:** TensorFlow, PyTorch, Keras, Scikit-learn, Computer Vision, NLP, Pandas, NumPy.
- **Cloud & DevOps: Microsoft Azure** (Certified), AWS, Google Cloud Platform, Docker, Kubernetes, Git, CI/CD.
- **Big Data & Databases:** Spark, Hadoop, PostgreSQL, MySQL, SQL Server.
- **Visualization:** Power BI, Tableau, Matplotlib, Seaborn, Plotly.

EDUCATION

University of Milan
Master's Degree in Physics
Milan, Italy
Sep 2020 – Jul 2022

- **Grade:** 110/110 | **Thesis:** Solving the many-fermion problem with deep neural networks.

University of Coimbra
Erasmus Exchange Program (Theoretical Physics)
Coimbra, Portugal
Sep 2019 – Feb 2020

- Focus on Computational Physics and Quantum Mechanics in an international academic environment.

University of Milan
Bachelor's Degree in Physics
Milan, Italy
Sep 2017 – Jul 2020

- **Thesis:** Relativistic correction of atom's ground state energy.

CERTIFICATIONS

- **Microsoft Azure Data Scientist Associate**
- **Microsoft Azure AI Engineer Associate**
- **Technologies for Process Execution** – H-FARM College

LANGUAGES & ACTIVITIES

- **Languages:** Italian (Native), English (Full Professional Proficiency).
- **Volunteering:** OMG (Operazione Mato Grosso) - Developed adaptability and teamwork in challenging environments.
- **Interests:** Finance, Physics, Skiing, Trekking.