# Paolo Chignoli

## Senior AI Engineer, Solutions Architect & Data Scientist | MSc in Physics

+39 3460314911 • paolo.chignoli.97@gmail.com • paolochignoli.it • LinkedIn Profile
Milan, Italy (Open to Remote)

## PROFESSIONAL PROFILE

Senior AI Engineer, Solutions Architect, and Data Scientist with a Master's degree in Physics (110/110) and 4+ years of experience delivering production-grade AI systems. Proven track record in architecting multi-agent workflows, GraphRAG pipelines, MLOps, and predictive modeling across Enterprise Consulting and Industrial Automation. Skilled in bridging executive stakeholder requirements with scalable cloud architectures, legacy-to-modern migrations, and deterministic LLM evaluation frameworks.

## PROFESSIONAL EXPERIENCE

### PwC
*Remote (US Market)*
**Senior AI Engineer & Data Scientist | Independent Contractor**
May 2026 – Present

- Architecting and deploying highly scalable **Knowledge Graphs**, multi-agent workflows, and enterprise AI solutions for US-market clients.
- Optimizing high-throughput data pipelines and resolving cloud infrastructure bottlenecks to ensure production reliability and low latency.
- Leading applied R&D on deterministic agentic AI frameworks, automated evaluation suites, and graph database integrations.

### Fortil Group (Consultant for Coesia)
*Remote / Bologna, Italy*
**Senior AI Engineer & Solutions Architect**
Sep 2025 – May 2026

- Lead AI Consultant for **Coesia** (Global Industrial Automation & Packaging), designing advanced end-to-end AI architectures.
- Built production **GraphRAG systems** using **LangGraph** and **Neo4j** to automate knowledge retrieval across complex industrial processes and schematics.
- Engineered scalable Machine Learning pipelines for predictive maintenance on high-frequency sensor data to increase Overall Equipment Effectiveness (OEE).
- Managed MLOps workflows to ensure continuous integration and deployment of containerized models in production.
- **Stack:** Python, LangGraph, Neo4j, LLMs (Claude / OpenAI API), Docker, Azure, AWS.

### JAKALA
*Milan, Italy*
**Data Scientist & AI Solutions Engineer**
Mar 2024 – Sep 2025

- **Led the migration of enterprise 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 distributed data processing pipelines using **PySpark** and **SQL** on cloud environments.

### Boolean
*Milan, Italy (Remote)*
**Data Analytics & Machine Learning 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 applied AI.

### 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, PySpark, C++, R, Java, Bash/Shell.
- **GenAI, Agents & LLMs:** LangGraph, LangChain, Hybrid RAG & GraphRAG, Model Context Protocol (MCP / FastMCP), Claude API, OpenAI API, Gemini, Neo4j (Graph DB), Hugging Face, Vector DBs, LLM Evals & Guardrails.
- **Machine Learning:** PyTorch, TensorFlow, Keras, Scikit-learn, Computer Vision, NLP, Pandas, NumPy.
- **Cloud & DevOps: Microsoft Azure** (Certified), AWS, Google Cloud Platform (GCP), Docker, Kubernetes, Git, CI/CD.
- **Big Data & Databases:** Apache Spark, Hadoop, Neo4j, PostgreSQL, MySQL, SQL Server.
- **Visualization:** Power BI, Tableau, Matplotlib, Seaborn, Plotly.

## CERTIFICATIONS

- **Claude Certified Architect – Professional** (Anthropic, 2026 | Verified Credly Badge)
- **Neo4j Certified Professional**
- **Neo4j Graph Data Science Certification**
- **Microsoft Azure AI Engineer Associate**
- **Microsoft Azure Data Scientist Associate**
- **Technologies for Process Execution** – H-FARM College

## EDUCATION

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

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

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

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

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

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

## 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.