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Francesco Sannicola

Machine Learning Engineer

Working experience

Machine Learning Engineer - Senior Consultant

I Links Management & Technology **♥** Bari **i** 01/2025– current

Python	Java	Oocker	Gitlab CI/CD L	angChain	AWS: EC	2, S3, Lambda,	Sage	Maker, Transcr	ribe, Polly, SC	QS, SNS	, RDS, EventBr	ridge
PyTorch	TensorF	low Ker	ras Kubernetes	Milvus	FastAPI	Spring Boot	Git	PostgreSQL	MongoDB	Redis	Keycloak	

Built a multi-tenant IoT energy forecasting platform for 3 enterprise clients with genetic algorithm-optimized models, real-time
dashboards, and MLOps from scratch (experiment tracking, model registry, versioned datasets, CI/CD, rollback), enabling
per-tenant customization and reducing peak energy costs, overall power consumption, and CO₂ emissions via demand forecasting.

Machine Learning Engineer - Consultant

II Links Management & Technology ♥ Bari **ii** 03/2023–12/2024

- Integrated browsing, crawling, and GraphRAG into a **ReAct Agent**-powered **chatbot** to unify on-premise and online sources, accelerating reporting and reducing prep time by 15–30 minutes per session.
- Designed an ESG reporting solution underpinned by RAG and GPT-4o, enabling automated KPI extraction and contextual
 retrieval from fund reports, significantly reducing compliance costs and enhancing decision-making efficiency.
- Developed an NLP web application powered by **encoder-only transformer models** to deliver contextual content recommendations with sub-5s latency, enhancing user engagement through integrated speech-to-text and text-to-speech voice interaction.
- Engineered predictive maintenance and remaining useful life estimation for Electric Vehicle (EV) charging stations, reducing
 maintenance costs by 30% and preventing unexpected failures through degradation models that identify critical wear variables.
- Built a loan **default prediction** model that achieved 80% accuracy with <2% false positives, empowering banks to proactively flag high-risk accounts 3–6 months before potential payment delays.
- Lecturer in software development, databases, and Python at <u>Associazione Formazione</u>, and in anomaly detection and time series analysis at <u>Links Academy AI & ML</u>, resulting in 7+ student job placements; practical lab materials available on <u>GitHub</u>.

Artificial Intelligence and Data - Analyst

I Deloitte ♥ Bari **=** 10/2022–02/2023

Qlik Sense SQL Pandas MS Excel Qlik NPrinting

• Developed an **ETL** workflow with automated data visualization of employee KPIs from survey data, transforming static reports into real-time dashboards that enhanced engagement, retention, and satisfaction monitoring for leadership decisions.

Al engineer and System Administrator - Intern

I Intesa Sanpaolo **▼** Torino **i** 12/2021–05/2022

Python TensorFlow Google Cloud Platform Flask Bokeh Bash

• Developed a real-time **time series forecasting** and anomaly detection solution, evolving from a statistical baseline to recurrent networks and autoencoders, dramatically reducing infrastructure failure response time from minutes to seconds.

Education

Master's degree in Computer Science - Al

- Major: Neural networks and Deep Learning, Machine Learning, Natural Language Technologies, Advanced Techniques and Architectures for Software Development, Conceptual Modeling for Semantic Web.
- 200h collabs: web pages development for freshman orientation, notes making and study support for student with disability.
- Thesis: development and dashboarding of real-time time series **anomaly detection** systems on univariate time series using statistics, machine learning and deep learning (<u>link</u> to thesis).

Bachelor's degree in Computer Science

1 University of Bari **✓ GPA**: 4/4 **1** 10/2016–12/2019

- Major: Computer Architecture, Operating Systems, Algorithms and Data structures, Databases, Software Engineering.
- Thesis: full-stack development of an indoor positioning system and integration with a content-based recommender system.

Certifications

Languages

Italian: Native English: Professional Working Proficiency