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Francesco Sannicola

Machine Learning Engineer

Working experience

Machine Learning Engineer - Senior Consultant
🏢 *Links Management & Technology* 📍 Bari 📅 01/2025– current

Python	Java	Docker	Gitlab CI/CD	LangChain	AWS: EC2, S3, Lambda, SageMaker, Transcribe, Polly, SQS, SNS, RDS, EventBridge

| PyTorch | TensorFlow | Keras | 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 CO_2 emissions via demand forecasting.

Machine Learning Engineer - Consultant
🏢 *Links Management & Technology* 📍 Bari 📅 03/2023–12/2024

- Integrated browsing, crawling, and GraphRAG retrieval 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 powered 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-based transformer models** to deliver contextual content recommendations with sub-5s latency, enhancing user engagement through integrated speech-to-text (Amazon Transcribe) and text-to-speech (Amazon Polly) 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 *Associazione Formazione*, and in anomaly detection and time series analysis at *Links Academy – AI & ML*, resulting in 10+ student job placements; practical lab materials available on *GitHub*.

Artificial Intelligence and Data - Analyst
🏢 *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.

AI engineer and System Administrator - Intern
🏢 *Intesa Sanpaolo* 📍 Torino 📅 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 - AI
🏛 *University of Turin* ✔ **GPA**: 3.71/4 📅 01/2020–04/2022

- 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 (link to thesis).

Bachelor's degree in Computer Science
🏛 *University of Bari* ✔ **GPA**: 4/4 📅 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

04/2024	**AWS Certified Machine Learning** ↗	03/2024	AWS Machine Learning Cert Preparation ↗
05/2022	GCP Big Data and ML Fundamentals ↗	04/2022	GCP Fundamentals: Core Infrastructure ↗

Languages

Italian:	Native	English:	Professional Working Proficiency