Gianmarco Santoro

Data Scientist - AI | Mechanical Engineer - Automation

I'm currently focused on **AI** and seeking opportunities in **Deep Tech**:

Computer Vision, Robotics, Sys Integration, Multi-Modal AI, Edge AI, and more.

+39 334 2044197 | gianmarcosantoro23@gmail.com | linkedin.com/in/gianmarco-santoro-j | github.com/Gianmarco-San

SKILLS

Visit my Website for more
https://gianmarco-san.github.io/J

IT & Tools

- Python, R, GIT-GitHub/Lab, Jupyter/Colab, HTML, CSS, PyTorch, NumPy, Pandas, Scikit-learn, Matplotlib, Seaborn
- PLC Siemens (Climatix IC), MsOffice, GSuite, excel, word, calendar, Notion, Canva
- Matlab & Simulink, AutoCAD, SolidWorks, CATIA, HyperMesh/Ext., MSC-Adams/Apex
- Basic: C, JS, Bash, SSH, TCP-IP, Modbus, qModMaster, mRemoteNG

Languages

- **Italian** | C2 - Mothertongue
- **English** | C1 - Professional
- **German** | A2 - Basic

Cultivating Startup ideas, a few:

- Project-Driven Work Community
- Food Social-Media

Further vertical skills summary

- **Energy:** power plants, fluid machines, technical physics (HVAC, heat exchange, acoustic, lightning)
- **Small civil projects:** buildings, bridges, retaining walls, hydraulic systems, topography and appraisal

PROFILE

From **EU**, free to relocate

Areas of interest

AI, robotics, computer vision, automation, R&D, smart devices, aerospace, e-mobility, energy transition, materials re-cycle, health, management, new idea dev.

More about me

My interests range from science, tech, food, art, nature, to travel, games, music, wellness
My sports: mainly running, swimming, gym
I love to continuously improve products, details & my abilities, focusing on the big picture to keep efficiency high

EXPERIENCE

DeepFake Detection Exploiting Self-Attention Maps | Computer Vision

MICC (UniFi) | Florence, Italy | Dec 2023 - Apr 2024

Implemented **Out-of-Distribution Detection** on *FF++* dataset achieving a mean **AUC-ROC of 60% on five types of forgeries**.

Smart Center | IT & System Integration

Daikin Applied Europe SpA | Rome, Italy | Jun 2021 - Sep 2022

Worked on cloud-based HVAC monitoring, system integration, and services:

- **Automated PLC mapping** and alarm selection using Python.
- Developed a sensor-to-cloud temperature control system: efficiency, safety.
- **Services**, such as periodic reports via web API.

Wireless Charging System | Operations Research

Enermove Srl | Turin, Italy | Apr 2020 - Mar 2021

Designed a **predictive methodology** for planning infrastructure in a **wireless dynamic EV charging system** for industrial logistics:

- Developed and **optimized a mathematical** model using genetic algorithms to align logistics with energy and economic needs.

Chip Extrusion Recycling | Experimental Research

Institut für Umformtechnik und Leichtbau | Dortmund, Germany | Feb - Sep 2018

Aluminum recycling process experimentation by direct extrusion of the waste material (**Chip Extrusion**) applied to mixed waste materials (**DoE**):

- Analyzed mechanical (traction, hardness), metallurgical (microstructure, metallography), chemical and aesthetic properties of extruded profiles.
- Process simulated via **FEM** software, compared results with experiments.
- Assessed industrial **feasibility** and identified process bottlenecks.

EDUCATION

Data Science & Statistical Learning | II Level Master

UniFi & IMT for Advanced Studies | Feb 2023 - Apr 2024 | 110/110 cum laude

Some topics: Optimization, GIS, **DL**, **NLP**, Graph Theory. A few **projects**:

- **ML pipeline**: Grid Search on linear regression degree.
- **Economics**: Salary prediction on features like education via CART models.
- **DL**: CIFAR-10 images recognition via CNNs models (CUDA, PyTorch).
- **Policy impact**: Causal inference on relationship via diff-in-diff.

Mechanical Engineering

M.Sc. @ PoliTo & B.Sc. @ UniBo | Until Apr 2021 | 104/110

Specialized in **automation**. Some extra projects:

- Fully **designed** a two-stage reduction gearbox for general applications.
- **Thermal design** of hot air boiler and home heating system.
- Built **numerical model for** air-hot fumes metal flue heat exchange.
- Automation and mechatronics labs (PLC, PID controls, pneumatic circuits)