Antonio Nocerino

Artificial Intelligence Engineer

Professional Summary

Al Engineer with a Master's in Artificial Intelligence and Robotics, specializing in Deep Learning, Computer Vision, NLP, and Generative Al. Proven expertise in designing advanced Al solutions such as object detection, semantic segmentation, and Retrieval-Augmented Generation (RAG) systems. Passionate about leveraging Al to drive innovation in smart mobility, robotics, and urban infrastructure.

Core Competencies

- o **Programming Languages:** Python (Advanced), Java, C/C++, Swift
- o ML Frameworks: PyTorch, TensorFlow, Keras, LlamaIndex
- Generative AI & NLP: RAG systems, Transformer models, Encoder-Decoder architectures, LLMs (locally deployed)
- o Frameworks/Tools: Flask, ROS, RESTful APIs (client and server)
- Specializations: Deep Learning, Computer Vision, NLP, Smart Mobility, Generative AI

Professional Experience

Oct. 2024 - Artificial Intelligence Engineer, Youbiquo srl, Cava de' Tirreni, Italy, GenAl & RAG

Present o Designed and implemented Generative AI and RAG systems for data-driven decision-making.

O Developed multimodal RAG solutions integrating structured and unstructured data.

May - Oct. Research Fellow, University of Salerno, Salerno, Italy, Al & Computer Vision

2024 O Developed computer vision solutions for smart city infrastructure in high-traffic environments.

- O Designed autonomous detection systems achieving 95% accuracy in real-time applications.
- Contributed to innovative urban analytics and infrastructure improvements.

Significant Projects

Mar. - Aug. Off-Road Autonomous Navigation System, University of Salerno, Salerno, Italy, Technical Innovation

 $2024~\odot~$ Developed a sensor fusion deep learning-based terrain segmentation model achieving 96% IoU.

o Integrated advanced techniques for real-time autonomous navigation in off-road environments.

Jan. 2024 Advanced Video Analytics Platform, University of Salerno, Salerno, Italy, Robotics & CV

- Built a real-time person tracking and attribute recognition system integrated with Robotics and NLP platforms.
- o Enhanced system efficiency with advanced recognition and voice-command interactions.

Education

Oct. 2022 – **Master's in Artificial Intelligence and Robotics**, *University of Salerno*, Salerno, Italy, Grade: 110/110 with Sept. 2024 honors - GPA: 3.95/4.0

o Focus areas: Machine Learning, Deep Learning, Computer Vision.

Oct. 2018 – Bachelor's in Computer Engineering, *University of Salerno*, Salerno, Italy, Grade: 110/110 with honors - GPA: Jul 2022 3.75/4.0

O Specialized in software engineering, algorithmic design, and application development.

Certifications

- 2024 **DeepLearning.Al** Building Agentic RAG with LlamaIndex, Advanced RAG, Retrieval Optimization (Tokenization to Vector Quantization).
- 2023 Google Generative Al Suite (Fundamentals, Attention Mechanisms, Transformers, Responsible Al).
- 2022 British Institute English (C1 Level, Certification).
- 2021 University of Salerno iOS Foundation.

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