



# **Yahya Momtaz** AI Engineer

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## Professional Experience

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### **AI Researcher, University of Naples Federico II**

05/2024 – present | Naples, Italy

- Building an LLM-powered data pipeline with RAG to automate workflows.
- Applied deep learning models to restore historical manuscripts and improve readability.
- Developed an OCR and post-correction pipeline (Kraken, PyTorch, ByT5).
- Deployed a full-stack web app (Flask, React, Docker, GCP).
- Developed the MAGIC website in React and implemented CI/CD pipelines with GitHub Actions.
- Published papers in J. Imaging and J. Electronics; presented at AIUCD and RAD 2025.
- <https://bleed-through-cleaner-app-469035949643.europe-west1.run.app/>
- <https://www.magic.unina.it/>

### **Apple Developer Academy, Apple and Unina**

09/2022 – 06/2023 | Naples, Italy

- Developed an iOS audio game from concept to release, including brainstorming, research, and full-stack implementation.
- Implemented CI/CD pipelines and managed beta testing to ensure quality and iterative improvements.
- <https://apps.apple.com/it/app/scape-inout/id6449718680>
- <https://www.developeracademy.unina.it/it/>

### **Data Scientist (internship), Spici srl**

01/2022 – 08/2022 | Naples, Italy

- Built a LinkedIn web scraper to automate structured data collection for marketing analysis.
- Developed a Flask API for Neo4j, reducing graph database implementation time by 40%.

### **Network Engineer, Saba INV**

06/2018 – 11/2020 | Tehran, Iran

- Maintained and monitored internal network infrastructure to ensure system reliability and uptime.
- Configured and managed servers and network devices supporting daily operations.
- Deployed hardware solutions to enhance workstation performance and connectivity.

## Education

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### **Master in Data Science, University of Naples Federico II**

10/2021 – 03/2024 | Naples, Italy

### **Bachelor in Software Engineering, Karaj Azad University**

09/2011 – 09/2016 | Karaj, Iran

## Publications

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**Modular Pipeline for Text Recognition in Early Printed Books Using Kraken and ByT5**   
Yahya Momtaz et al. *Electronics* 2025, 14(15), 3083

**Minimizing Bleed-Through Effect in Medieval Manuscripts with Machine Learning and Robust Statistics**   
Adriano Ettari, Massimo Brescia, Stefania Conte, Yahya Momtaz and Guido Russo.  
*J. Imaging* 2025, 11(5), 136;

## Languages

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**English: C1** • **Italian: B1**

## Skills

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Python

PyTorch, TensorFlow, Scikit-Learn, Hugging Face, NLP (LLMs, RAG, Text Mining), Model Deployment, Fine-Tuning

OpenCV, YOLOv8, Image Segmentation

Pandas, NumPy, Matplotlib, Plotly, Tableau

SQL, PostgreSQL, Vector Database, Neo4j, Data Pipelines, Apache Airflow

Docker, Git, GitHub Actions (CI/CD), Google Cloud Platform (GCP), AWS (Familiar), Model Context Protocol (MCP)

React, JavaScript

## Projects

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### AI Image API

- Developed an object detection and image enhancement API using YOLO and PyTorch.
- Built Flask backend, Dockerized, deployed on GCP, and created a responsive JS frontend.
- <https://aiimagelive.web.app> ↗

### Multi Agent TradeGraph

- Contributed to a multi-agent AI financial advisor using LangGraph, GPT-4, and Firecrawl for real-time stock analysis.
- Fixed critical pipeline issues, enabling end-to-end multi-stock portfolio recommendations.
- <https://github.com/ApexAI-Labs/TradeGraph> ↗

### Retrieval Augmented Generation (RAG) Chatbot:

- Developed a document-based QA chatbot for Italian legal texts using LLMs and Information Retrieval techniques.
- Implemented Python backend, Streamlit frontend.
- <https://github.com/yahyamomtaz/ChatBot> ↗

### Prompt Analyzer

- Built a Streamlit app for interactive dataset exploration with LLM insights.
- Implemented CI/CD pipelines and MLOps practices; integrated OpenAI API for prompt-driven analysis.
- <https://pandasai-dataset-analysis.streamlit.app> ↗

## References

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**Professor Guido Russo**, Full Professor of Physics Department, University of Naples Federico II  
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**Professor Alessio Botta**, Associate professor of Computer Engineering, University of Naples Federico II  
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## Certificates

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<https://www.linkedin.com/in/yahya-momtaz-601b34108/details/certifications> ↗