Luca **Di Vita**

Profile

Machine Learning Engineer with a degree in Computer Engineering and solid experience in **Python** development and the design of **Machine Learning** solutions, with a background in **software engineering**. Curious and research-oriented, I cultivate a strong personal interest in **evolutionary computation** and experimental approaches to artificial intelligence. Actively involved in tech communities, I am an organizer of GDG Pescara and co-founder of Python Pescara, where I deliver technical talks and contribute to training and knowledge-sharing initiatives. I believe in the value of open collaboration and strive to make complex topics accessible through clear and engaging content.

Contacts

@ lucadivita.ldv@gmail.com
⌖ lucadivita.it

Personal Information

Citizenship: **Italian**
Languages: **Italian** (native), **English** (B2)

Skills

- **Python**, SQL (ML & Data: **scikit-learn**, **PyTorch**, Keras, Pandas, NumPy, …)
- Backend: **Flask**, FastAPI
- Tools: Docker, Git
- Soft skills: effective **communication** with stakeholders and clients, collaboration within cross-functional **teams**, structured **problem solving**.

Experience

Senior Machine Learning Engineer at *Cy4Gate (ELT Group)*   **2023.11–present**
◇ Initially as a consultant through Frontiere (2023.11–2024.08), then internalised (2024.09–present). Development of Machine Learning models for RTA SIEM in **on-premise** environments, with **anomaly detection** pipelines based on **scikit-learn** (batch) and **River** (near real-time), integrated into low-latency **Docker** microservices and connected to **Kafka** and **Elasticsearch** systems.

Lecturer (Freelance) at *ITS Lanciano*   **2024.04–2024.06**
◇ Teaching object-oriented programming in Python.

Senior Machine Learning Engineer (Freelance) at *2oTab*   **2023.08–present**
◇ Development of the *CONNECT* service using **Python**, **Hugging Face** transformer models and the **Qdrant** vector database for scientific paper similarity search and attention-based explainability.
◇ Development and fine-tuning of **YOLO**-based recognition models for the CNR *AUTOMA* project, with **data augmentation** pipelines dedicated to identifying alien species in Italian seas.

Middle Machine Learning Engineer at *Frontiere*   **2023.03–2023.11**
◇ Development of ML microservices with **Docker**, including: *PadelCam*, using **YOLO** for human detection on Raspberry Pi, automatic region-of-interest cropping, and image classification through a **CNN**.
◇ Automatic email classification system using **NLP** techniques, leveraging **BERT** for **embedding** generation and a *spam/non-spam* classifier.

Junior Machine Learning Engineer at *Aesys*   **2019.11–2023.03**
◇ For **Generali Assicurazioni**: development of **NLP** systems with **SpaCy** and **OCR** pipelines using **Tesseract**, **CRNN**, and **Vision/Textract** services, combined with **computer vision** techniques. Creation of document classification models based on **scikit-learn** and **Keras**, deployed in the **GCP** cloud environment.
◇ For **Levis**: development of **B2C sell-out forecasting** models using **scikit-learn**, with hyper-parameter optimization through **Optuna** on **AWS** infrastructure.
◇ For **Digital Soft**: development of **predictive maintenance** and **demand forecasting** models using **scikit-learn** and **Keras**, integrating **explainability** techniques with **SHAP** for result interpretability.

Research Fellow at *University of L'Aquila*   **2019.04–2019.11**
◇ **Deep Reinforcement Learning** applied to Cyber Security through **Mininet** simulations, using **Keras** with a **Q-Learning** algorithm. Malware analysis from `.pcap` files sourced from *Malware Traffic Analysis*.

Education

Master's Degree in Computer Engineering (110/110) *University of L'Aquila*. **2016–2018**
◇ Thesis: *Deep Reinforcement Learning applied to Cyber Security*.
◇ Main study areas: software engineering, algorithms and data structures, advanced databases, machine learning.

Publications & Talks

MTA-KDD'19: A Dataset for Malware Traffic Detection *CEUR-WS*   **2020**
◇ Updated dataset for malware traffic analysis, built through collection, cleaning and preprocessing of large volumes of network traffic to train machine learning models.

A Spherical Directional Anemometer Sensor System *MDPI*   **2017**
◇ Proposal and analysis of a compact directional anemometer without mechanical moving parts, based on differential pressure measurements using inductive transducers.

Technical articles and blog content available at:
lucadivita.it

The full list of my talks is available at:
sessionize.com/lucadivit

Hobbies

- *Training and running:* gym workouts and running as part of my wellbeing routine.
- *Reading:* passionate reader, from technical and scientific texts to fiction.
- *Tech community:* active participation in events, organizing initiatives, and delivering talks.
- *Blogging:* writing technical and educational articles.
- *Gaming:* casual gamer in my free time.
- *Studying:* continuous learning through books and specialized materials.