

Luca Barsellotti

PHD STUDENT AT **AlmageLab** (UNIVERSITY OF MODENA AND REGGIO EMILIA)

☎ (+39) 3396081099 | ✉ luca.barsellotti@gmail.com | 🏠 lucabarsellotti.github.io | 📄 lucabarsellotti | 📁 luca-barsellotti

Education

Ph.D. in Information and Communication Technologies

Modena, Italy

AlmageLab - University of Modena and Reggio Emilia

November 2022 - October 2025

- Research interests: Open-Vocabulary Semantic Segmentation and Embodied Navigation
- Supervised by Prof. Rita Cucchiara
- Funded by Leonardo

M.Sc. in Artificial Intelligence and Data Engineering

Pisa, Italy

University of Pisa

October 2019 - February 2022

- Thesis Title: "Design and implementation of a system for passive data acquisition and automatic classification of financial instruments based on Machine Learning algorithms" (in cooperation with ION Trading)
- Average Grade: 29.47/30. Final Mark: 110/110 cum laude

B.Sc. in Computer Science Engineering

Pisa, Italy

University of Pisa

September 2016 - October 2019

- Thesis Title: "Reconstruction of a spectrogram using Context-Encoder architectures based on Convolutional Neural Networks"
- Average Grade: 26.92/30. Final Mark: 110/110

Experience

Research Fellow

Pisa, Italy

CNIT and Scuola Superiore Sant'Anna

January 2022 - October 2022

Research on deep learning for resource-constrained SmartNICs, network traffic analysis, and autonomous driving drones.

Machine Learning Intern

Pisa, Italy

ION Trading

September 2021 - December 2021

Machine learning and data engineering for retrieving, cleaning and classifying financial instruments.

Publications

- [L. Barsellotti*](#), R. Amoroso*, M. Cornia, L. Baraldi, R. Cucchiara
Training-Free Open-Vocabulary Segmentation with Offline Diffusion-Augmented Prototype Generation
in *The IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 2024
Seattle, WA
- D. Caffagni*, F. Cocchi*, [L. Barsellotti*](#), N. Moratelli*, S. Sarto*, L. Baraldi*, L. Baraldi, M. Cornia, R. Cucchiara
The (R)Evolution of Multimodal Large Language Models: A Survey
in *arXiv*, 2024
- [L. Barsellotti*](#), R. Amoroso*, L. Baraldi, R. Cucchiara
FOSSIL: Free Open-Vocabulary Semantic Segmentation through Synthetic References Retrieval
in *The IEEE/CVF Winter Conference on Application of Computer Vision (WACV)*, 2024
Waikoloa, HI
- [L. Barsellotti](#), R. Amoroso, L. Baraldi, R. Cucchiara
Enhancing Open-Vocabulary Semantic Segmentation through Prototype Retrieval
in *International Conference on Image Analysis and Processing (ICIAP)*, 2023
Udine, Italy
- [L. Barsellotti](#), L. De Marinis, F. Cugini, F. Paolucci
FTG-Net: Hierarchical Flow-To-Traffic Graph Neural Network for DDoS Attack Detection
in *International Conference on High-Performance Switching and Routing (IEEE HPSR)*, 2023
Albuquerque, NM
- [L. Barsellotti](#), F. Alhamed, J. J. Vegas Olmos, F. Paolucci, P. Castoldi, F. Cugini
Introducing Data Processing Units (DPU) at the Edge
in *International Conference on Computer Communications and Networks (ICCCN)*, 2022
Virtual

Activities

- Accepted at the **International Computer Vision Summer School (ICVSS)** that will be hosted in Sicily on July 2024
- Teacher of the lecture on "Image Segmentation" for the "Intensive Master AI and ML for Smart Factory" (Experis Academy)
- Reviewer for **ECCV** (2024), **IROS** (2024), **Pattern Recognition** (2024), **TOMM** (2023), and **ICIAP** (2023)
- Attended the **ELLIS Summer School on Large-Scale AI** on September 2023
- Attended the **International Summer School on Machine Vision (VISMV)** on September 2023
- Participant in the **NVIDIA DOCA Hackathon** on March 2022

Skills

Programming

- Programming: Python (advanced knowledge), C, C++, Java (basic knowledge)
- Libraries and tools: PyTorch, NumPy, OpenCV, PyCharm, Visual Studio Code

Language & Writing

- English (Full professional proficiency)
- Italian (Native proficiency)
- German (Beginner)