

# Andrea Amaduzzi

Research Intern at Niantic Spatial - PhD candidate in Computer Vision

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## Professional Experience

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### Niantic Spatial

Research Intern

London, UK

Sept 2025 – Jan 2026

- Advisors: [Shuai Chen](#), [Eric Brachmann](#), [Tommaso Cavallari](#)
- Working on Multimodal AI for Spatial Reasoning

### Datalogic

R&D Vision Software Engineer

Bologna, Italy

June 2020 – Nov 2021

- Resolved critical, low-light barcode reading issues, reducing production error rates by >50% across the product line

### KUKA-Corporate Research

Research Intern

Augsburg, Germany

July 2019 – Jan 2020

- Worked on human action recognition through 3D sensors and deep neural networks
- Mentored 30+ new research interns on deep learning workflows and 3D sensor projects, enhancing team productivity and technical alignment

## Education

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### PhD in Data Science and Computation

Nov 2021 - March 2026

Computer Vision Laboratory, University of Bologna, Italy

Advisor: [Prof. Luigi Di Stefano](#)

- Thesis title: "Multimodal AI for 3D-language Understanding"
- Published 3 first-author publications at top-tier conferences (ICCV, NeurIPS)
- Trained large-scale models on LEONARDO CINECA supercomputer, thanks to 3 HPC grants

### M.S. in Automation Engineering

Sept 2017 - March 2020

University of Bologna, Italy

- Overseas Project at University of Technology of Sydney (GPA: 3.88/4.0 Top 1%)
- Thesis: "Deep Learning – based Human Actions Recognition in a Collaborative Robotics Environment" at KUKA–Corporate Research, Augsburg, Germany
- Graduation Mark: 110/110 cum laude
- GPA: 29.23/30.00 (Top 3%)

### B.S. in Automation Engineering

Sept 2014 - July 2017

University of Bologna, Italy

- Thesis: "sEMG-based Torque Estimation Using Recurrent Neural Networks and Genetic Algorithms"
- Graduation Mark: 110/110 cum laude
- GPA: 28.71/30.00 (Top 1%)

## Publications

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**Andrea Amaduzzi**, Pierluigi Zama Ramirez, Giuseppe Lisanti, Samuele Salti, Luigi Di Stefano  
"Spatially-aware Weights Tokenization for NeRF-Language Models", **NeurIPS 2025**

**Andrea Amaduzzi**, Pierluigi Zama Ramirez, Giuseppe Lisanti, Samuele Salti, Luigi Di Stefano  
"Scaling LLaNA: Advancing NeRF-Language Understanding Through Large-Scale Training", **under review at TPAMI**

**Andrea Amaduzzi**, Pierluigi Zama Ramirez, Giuseppe Lisanti, Samuele Salti, Luigi Di Stefano  
"LLaNA: Large Language and NeRF Assistant", **NeurIPS 2024**

**Andrea Amaduzzi**, Giuseppe Lisanti, Samuele Salti, Luigi Di Stefano  
"Looking at words and points with attention: a benchmark for text-to-shape coherence", **ICCVW 2023**

## Teaching

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Computer Vision and Image Processing M	Fall 24
Logic Design T	Spring 24
Logic Design T	Spring 23
Logic Design T	Spring 22

## Skills

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### Languages:

Italian (mother tongue), English (IELTS 8.0), German (A2), Spanish (A2)

**Technologies:** Python, Pytorch, Vision Language Models, Large Language Models, Generative Diffusion Models, Distributed training, GitLab, C, C++, LaTeX, Linux, Bash, Javascript