# Alessandro Simoni

## PhD Candidate

## **Summary**

I'm a PhD Candidate at the University of Modena and Reggio Emilia with my thesis defense expected to be in March 2024. I'm searching for both Research Scientist and Research Engineer positions in Deep Learning and Computer Vision. Considering my research background in 3D Deep Learning and Computer Vision, I would like to continue working on topics related to 3D understanding from images and videos, but I'm motivated to explore also other topics.

# **Work Experience**

## AlmageLab, University of Modena and Reggio Emilia

May 2020 - (July 2024)

Research fellow + PhD Student

Modena, Italy

- Al platform with digital twins of interacting robots and people (July 2023 July 2024)
- Study of recent combinations of CNN and Vision Transformer architectures (June 2022 June 2023)
- Prediction of Activities and Events by Vision in an Urban Environment (May 2020 May 2022)

#### Education

## University of Modena and Reggio Emilia

November 2020 – (*March 2024*)

PhD in Computer Vision and Deep Learning

Modena, Italy

- Research Topic: the role of semantic keypoints in the understanding of the 3D real world through image analysis
- Activities: 3D object reconstruction (neural rendering, NeRF), 3D skeleton pose estimation

#### University of Modena and Reggio Emilia

September 2017 – February 2020

MSc in Computer Engineer

Modena, Italy

• Key exams: Deep Learning, Computer Vision, Machine Learning, Multimedia Data Processing

## Recent Publications (full list on Google Scholar)

Depth-based 3D human pose pose refinement: evaluating the refinet framework A. D'Eusanio, A. Simoni, S. Pini, G. Borghi, R. Vezzani, R. Cucchiara	2023 PRL
Semi-perspective decoupled heatmaps for 3D robot pose estimation from depth maps A. Simoni, S. Pini, G. Borghi, R. Vezzani	2022 IROS + RA-L
Multi-category mesh reconstruction from image collections  A. Simoni, S. Pini, R. Vezzani, R. Cucchiara	2021 3DV
Future urban scene generation through vehicle synthesis A. Simoni, L. Bergamini, A. Palazzi, S. Calderara, R. Cucchiara	2021 ICPR

## Certifications

#### First Certificate in English (FCE)

December 2020

• University of Cambridge ESOL Examinations

# **Skills**

**Spoken languages**: Italian (mothertongue), English (C1 certified) **Programming languages**: Python (proficiency), C/C++ (basic) **Libraries & Tools**: Pytorch, OpenCV, Numpy, VSCode, PyCharm