

Alessandro Simoni

PhD Student @ Department of Engineering “Enzo Ferrari”

Birth date (day/month/year): 27/09/1994

Address: Via Monsignor Luigi della Valle, 36, 41126, Modena, Italy

Contacts: ☎ (+39) 3348040595 | 📩 alle.simoni.as@gmail.com | 🏷 alexj94.github.io



Summary

He is a PhD student under the tutorship of Prof. Roberto Vezzani at the International Doctorate School in ICT (Unimore, Italy) with the following research topic: “Computer Vision and Artificial Intelligence for Collaborative Robotic Environments”.

His main interests are in Human-centric AI and Robotics exploiting deep learning and computer vision techniques applied to the 3D world.

Knowledge and computer skills

Programming languages Python (proficiency), C++, JavaScript

Libraries and Tools PyTorch, NumPy, OpenCV, PyCharm

Domains Deep Learning, 2D/3D Computer Vision, 3D Reconstruction, 3D Human/Robot Pose Estimation

Spoken languages Italian mothertongue, English C1 (certified ESOL Cambridge)

Working experiences

AlmageLab - University of Modena and Reggio Emilia

Modena, Italy

Research fellow

May 2020 - Nov. 2020

Supervisor: Prof. Roberto Vezzani

Research project: “PREVUE - Prediction of Activities and Events by Vision in an Urban Environment”

- Generation of new viewpoints through the prediction of 3D geometry and appearance in an urban environment.
- Study, analysis and design of algorithms to estimate the 3D geometry of a scene predicting new views of vehicles in urban scenarios.

AlmageLab - University of Modena and Reggio Emilia

Modena, Italy

Student internship for master's degree thesis

Jul. 2019 - Feb. 2020

Supervisor: Prof. Rita Cucchiara

Thesis title:

“Future urban scene generation: a deep learning approach for a 3D temporal vehicle reconstruction starting from monocular images”

- Study of modern architectures in the context of computer vision and artificial intelligence reading scientific papers
- Use of neural networks developed in PyTorch
- Use of 3D geometry for solving object reprojection problems from 3D to 2D

Education

University of Modena and Reggio Emilia

Modena, Italy

PhD student - Curriculum “Computer engineering and science”

Nov. 2020 - ongoing

Supervisor: Prof. Roberto Vezzani

University of Modena and Reggio Emilia

Modena, Italy

Master's degree in computer engineering

Sep. 2017 - Feb. 2020

- GPA: 27.806/30. Final grade: 108/110

University of Modena and Reggio Emilia

Modena, Italy

Bachelor's degree in computer engineering

Sep. 2013 - Feb. 2017

- GPA: 23.607/30. Final grade: 91/110

Certifications

First Certificate in English (FCE)

Grade A (Score 180), University of Cambridge ESOL Examinations

Dec. 2020

4th Advanced Course on Data Science and Machine Learning (ACDL 2021)

Participation certificate with final exam

Jul. 2021

16th International Computer Vision Summer School (ICVSS 2022)

Participation certificate with final exam

Jul. 2022

Selected publications

Complete list on [Google Scholar](#).

JOURNALS

Pattern Recognition Letters (PRL)

A.D'Eusanio, A. Simoni, S. Pini, G. Borghi, R. Vezzani, R.Cucchiara

Mar. 2023

“Depth-based 3D human pose refinement: Evaluating the refinet framework”

IEEE Robotics and Automation Letters (RA-L)

A. Simoni, S. Pini, G. Borghi, R. Vezzani

Oct. 2022

“Semi-Perspective Decoupled Heatmaps for 3D Robot Pose Estimation from Depth Maps”

Informatics

A. D'Eusanio, A. Simoni, S. Pini, G. Borghi, R. Vezzani, R. Cucchiara

Aug. 2020

“Multimodal hand gesture classification for the human-car interaction”

CONFERENCES

9th International Conference on 3D Vision

Virtual, Online

A. Simoni, S. Pini, R. Vezzani, R. Cucchiara

1-3 Dec. 2021

“Multi-category mesh reconstruction from image collections”

16th VISIGRAPP

Virtual, Online

A. Simoni, A. D'Eusanio, S. Pini, G. Borghi, R. Vezzani

8-10 Feb. 2021

“Improving car model classification through vehicle keypoint localization”

25th International Conference on Pattern Recognition

Virtual, Online

A. Simoni, L. Bergamini, A. Palazzi, S. Calderara, R. Cucchiara

10-15 Jan. 2021

“Future urban scene generation through vehicle synthesis”

8th International Conference on 3D Vision

Virtual, Online

A. D'Eusanio, A. Simoni, S. Pini, G. Borghi, R. Vezzani, R. Cucchiara

25-28 Nov. 2020

“A transformer-based network for dynamic hand gesture recognition”

Additional information

Citizenship Italian, German

Travelling Passport, B license, own car