



# Jacopo Dapuzo

✉ Email: \_\_\_\_\_

Date of birth: 01/05/1997 Nationality:

## WORK EXPERIENCE

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[ 02/2023 – Current ]

### University teaching assistant

*Università degli studi di Genova - DIBRIS*

**City:** Genova

**Country:** Italy

Assist the professor of the specific course, including preparation of lectures and laboratories and leading review and feedback sessions for the students.

**Course:** Computational Vision

**Degree:** LM-18 - 2nd level degree in Computer Science

[ 02/2023 – Current ]

### University teaching assistant

*Università degli studi di Genova - DIBRIS*

**City:** Genova

**Country:** Italy

Assist the professor of the specific course, including grading students' assignments and leading reviews and feedback during hands-on activities.

**Course:** Algoritmi e Strutture dati (Data structures & Algorithms)

**Degree:** L-31 - 1st level degree in Computer Science

[ 07/2021 – 12/2021 ]

### ICT application developer

*Esaote S.p.A* <https://www.esaote.com/>

**City:** Genova

**Country:** Italy

**Name of unit or department:** R&D and patents of ultrasound applications

**Business or sector:** Manufacturing

**Main activities and responsibilities:** Study and development of artificial intelligence algorithms with application to real data.

**Acquired skills and achieved objectives:** Skills acquired: physics and instrumentation of medical ultrasound imaging.

Objectives achieved: implementation of automatic classification machine learning systems on an ultrasound system.

Employed as: intern/trainee - undergraduate internship | Number of hours: 625

[ 09/2020 – 07/2021 ]

### Tutoring

*Università degli studi di Genova - DIBRIS*

**City:** Genova

**Country:** Italy

**Business or sector:** Education

**Main activities and responsibilities:** Teaching assistant. Didactic-integrative, preparatory and remedial activities for students in the first year of the bachelor's degree in computer science (DIBRIS).

Employed as: a fixed-length contract (50 hours)

## EDUCATION AND TRAINING

[ 01/11/2022 – Current ]

### Ph.D. in Computer Science

#### *Università degli studi di Genova - DIBRIS*

**Address:** Via Dodecaneso, 35, 16146, Genova, Italy

**Supervisors:** Francesca Odone & Nicoletta Noceti

**Project:** Image enhancement and denoising in the deep learning era

Nowadays, the process of restoring information from noisy images to obtain a clean image is a problem of paramount importance, especially in domains where acquisition and transmission are still challenging. Although deep learning is developing rapidly, it is not necessarily an effective way to solve the denoising problem because data and synthetic data do not describe the complexity of real noise. A direction could be to introduce expert knowledge in the model thanks to Disentangled representation learning in order to simulate real-life scenarios with non i.i.d. data.

[ 02/2022 – 11/2022 ]

### Research Fellow

#### *Università degli studi di Genova - DIBRIS*

**Address:** Via Dodecaneso, 35, 16146, Genova, Italy

**Thesis:** Machine Learning methods for feature and object detection in challenging domains.

We refer to challenging domains those characterized by the scarcity of data and those whose properties are such that tools commonly used for computer vision problems turn out to be ineffective, especially deep learning methods.

I faced the problem of segmentation of mammography images and identification of marine species from underwater videos. Such data requires expert knowledge to be acquired and annotated, and these determine the scarcity. Moreover, the images are quite noisy posing further challenges to the tasks. The goal is to study and test tools for a better generalization of the models using so little data.

Active participation to several research activities within MaLGa lab, there included: group meetings, reading groups, topic groups. These activities allowed me to broaden my knowledge on computer vision and machine learning as well as improving my soft skills such as public speaking, scientific writing.

[ 2019 – 2021 ]

### LM-18 - 2nd level degree in Computer Science: data science & engineering - artificial intelligence

#### *Università degli studi di Genova - DIBRIS*

**Address:** Via Dodecaneso, 35, 16146, Genova, Italy

**Final grade:** 110/110 cum laude

**Thesis:** Machine learning methods for standard scanplanes detection in medical images and videos

**Field(s) of study:** Computer vision

**Thesis supervisor:** Francesca Odone

[ 2016 – 2019 ]

### L-31 - 1st level degree in Computer Science

#### *Università degli studi di Genova - DIBRIS*

**Address:** Via Dodecaneso, 35, 16146, Genova, Italy

**Field(s) of study:** Natural sciences, mathematics and statistics: *Physics*

**Final grade:** 110/110 cum laude

**Thesis:** CIRQ, UN FRAMEWORK OPEN SOURCE PER I COMPUTER QUANTISTICI SVILUPPATI DA GOOGLE

## LANGUAGE SKILLS

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**Mother tongue(s):** Italian

**Other language(s):**

**English**

**LISTENING B2 READING B2 WRITING B2**

**SPOKEN PRODUCTION B2 SPOKEN INTERACTION B2**

*Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user*

## PUBLICATIONS

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[ 2023 ]

**Knowledge distillation for efficient standard scanplane detection of fetal ultrasound**

**Journal:** Medical and Biological Engineering & Computing

**Authors:** Jacopo Dapuzo, Luca Zini, Francesca Odone

## OTHER ACTIVITIES

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**Responsible for reading group seminars**

Organizing the reading group of our research unit (Machine Learning for Vision) in the MaLGa lab.

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