

# Donald Shenaj

*Ph.D Student*

Date of birth: 1997-10-20

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🐙 [donaldssh](https://github.com/donaldssh)

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## Research Interests

Federated Learning, Continual Learning, Domain Adaptation, Computer Vision

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## Work Experience

May. 2023 - **Visiting Researcher**, Mila - Quebec AI Institute & Concordia University

Nov. 2023 Supervisor: Eugene Belilovsky.

Oct. 2021 - **Teaching Assistant**, University of Padova

Present M.Sc. courses: Computer Vision (22/23), Scientific computing with python (22/23), Machine Learning (21/22).

Mar. 2021 - **Research Intern / Master Thesis**, University of Padova, Department of

August 2021 Information Engineering, LTTM research group.

Supervisor: Pietro Zanuttigh.

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## Education

Oct. 2021 - **Ph.D. in Information Engineering**, University of Padova, Department of

Present Information Engineering, LTTM research group.

Supervisor: Pietro Zanuttigh.

Research topic: Federated Learning for Computer Vision.

Fellowship: University scholarship on free subject.

Oct. 2019 - **M.Sc. in ICT for Internet and Multimedia**, University of Padova.

Sept. 2021 Grade: 110/110 cum Laude.

Thesis: Coarse-to-Fine Learning for Semantic Segmentation across Multiple Domains.

Supervisor: Pietro Zanuttigh.

Sept. 2016 - **B.Sc. in Electronics Engineering for Energy and Information**, University

Oct. 2019 of Bologna.

Grade: 110/110 cum Laude.

Thesis: Implementation and analysis of a vehicle counter system with Python and OpenCV.

Supervisor: Enrico Paolini.

Sept. 2011 - **High School Diploma**, ITTS Leonardo Da Vinci, Rimini.

July 2016 Grade: 100/100.

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## Computer Skills

- Programming and scripting: C, C++, Python, Matlab/GNU Octave, Bash, VHDL, LabVIEW, Java, JavaScript
- Typesetting:  $\text{\LaTeX}$ , Markdown, HTML, CSS
- Scientific Computing: Numpy, SciPy, Pandas, Matplotlib, Scikit-learn
- Deep Learning: PyTorch, TensorFlow, Keras, OpenCV
- System: Linux, Git, HPC, Singularity, Slurm

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## Languages

Italian	Native proficiency
English	Full professional proficiency
Albanian	Elementary proficiency
French	Elementary proficiency

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## Awards

- 2016 European competition “I Giovani e le Scienze”, Italian selection for EUCYS and Mostratec International Science and Technological Fair (Brasil), with the project “Laser harp with touch response”.

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## Interests

Programming, Rubik’s Cubes, Music, TV Series, Skateboarding.

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## Seasonal Schools

GTTI MMSP 2022 Thematic Meeting on Multimedia Signal Processing  
IEEE/DEI Summer Ph.D. School of Information Engineering “Silvano Pupolin” – SSIE 2022  
GTTI MMSP 2023 Thematic Meeting on Multimedia Signal Processing  
CIFAR & Mila Deep Learning + Reinforcement Learning (DLRL) Summer School 2023

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## Publications

### Journals

- [J1] D. Shenaj, F. Barbato, U. Michieli, P. Zanuttigh, “Continual coarse-to-fine domain adaptation in semantic segmentation”, Image and Vision Computing (IMAVIS), 2022.

### Conferences

- [C1] D. Shenaj\*, E. Fani\*, M. Toldo, D. Caldarola, A. Tavera, U. Michieli<sup>†</sup>, M. Ciccone<sup>†</sup>, P. Zanuttigh<sup>†</sup>, B. Caputo<sup>†</sup>, “Learning Across Domains and Devices: Style-Driven Source-Free Domain Adaptation in Clustered Federated Learning”, IEEE/CVF Winter Conference on Applications of Computer Vision (WACV) [acceptance rate first round=22.3%], 2023.

- [C2] D. Shenaj, M. Toldo, A. Rigon, P. Zanuttigh, Asynchronous Federated Continual Learning, in: Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition, 2023, pp. 5054–5062.

\* indicates equal contribution, <sup>†</sup> indicates equal supervision

Preprints

- [P1] G. Rizzoli, D. Shenaj, P. Zanuttigh, Source-Free Domain Adaptation for RGB-D Semantic Segmentation with Vision Transformers, arXiv preprint arXiv:2305.14269 (2023).