Donald Shenaj

Ph.D Student

Date of birth: 1997-10-20
Padova, PD, Italy
donald.shenaj@phd.unipd.it
donaldssh.github.io
donald-shenaj
donaldssh

Research Interests

Federated Learning, Continual Learning, Domain Adaptation, Computer Vision

Work Experience

May. 2023 - Nov. 2023 **Visiting Researcher**, Mila - Quebec AI Institute & Concordia University
Supervisor: Eugene Belilovsky.

Oct. 2021 - Present **Teaching Assistant**, University of Padova
M.Sc. courses: Computer Vision (22/23), Scientific computing with python (22/23), Machine Learning (21/22).

Mar. 2021 - August 2021 **Research Intern / Master Thesis**, University of Padova, Department of Information Engineering, LTTM research group.
Supervisor: Pietro Zanuttigh.

Education

Oct. 2021 - Present **Ph.D. in Information Engineering**, University of Padova, Department of Information Engineering, LTTM research group.
Supervisor: Pietro Zanuttigh.
Research topic: Federated Learning for Computer Vision.
Fellowship: University scholarship on free subject.

Oct. 2019 - Sept. 2021 **M.Sc. in ICT for Internet and Multimedia**, University of Padova.
Grade: 110/110 cum Laude.
Thesis: Coarse-to-Fine Learning for Semantic Segmentation across Multiple Domains.
Supervisor: Pietro Zanuttigh.

Sept. 2016 - Oct. 2019 **B.Sc. in Electronics Engineering for Energy and Information**, University 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 - July 2016 **High School Diploma**, ITTS Leonardo Da Vinci, Rimini.
Grade: 100/100.

Computer Skills

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

Languages

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

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".

Interests

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

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

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.

[J2] D. Shenaj*, G. Rizzoli*, , P. Zanuttigh, "Federated Learning in Computer Vision", IEEE Access, 2023.

Conferences

[C1] D. Shenaj*, E. Fani*, M. Toldo, D. Caldarola, A. Tavera, U. Michieli†, M. Ciccone†, P. Zanuttigh†, B. Caputo†, "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, † 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).