

Curriculum vitae

Guglielmo Camporese

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Personal

Birth: Camposampiero (PD), Italy, on March 8th 1993. Italian citizen. Male.
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Education

Ph.D. Student in Brain Mind and Computer Science <i>University of Padova, Department of Math (Tullio Levi-Civita) and Psychology</i>	Padova, Italy 2019–Present
MS degree in Telecommunications Engineering, 110/110 e Lode <i>University of Padova, Department of Information Engineering (DEI)</i>	Padova, Italy 2016–2019
BS degree in Information Engineering <i>University of Padova, Department of Information Engineering (DEI)</i>	Padova, Italy 2012–2016

Work Experience

Amazon <i>Applied Science Intern</i>	Seattle, WA (remote from Italy) 2021/12–2022/06
Worked on the Amazon Web Services AI Labs on the Rekognition team in a research project focused on video predictive understanding using deep learning models. In particular, I investigated and innovated how to anticipate and early recognize events on videos, before they occur.	
Amazon <i>Applied Science Intern</i>	Turin, Italy 2020/06–2020/09
Worked on improving recognition of speech with disfluencies in the Amazon Alexa Automatic Speech Recognition (ASR) team. During the project I worked on the multi-lingual modelling of particular speech disorders, mining relevant datasets, designing and training neural network architectures and delivering high quality results.	
University of Padova <i>Machine Learning Teacher Assistant</i>	Padova, Italy 2020/03–Present
Teacher assistant for the machine learning class in the Data Science Master Degree. In particular, I lectured lessons, I prepared the laboratories, and I supervised and evaluated the students for their final project of the course.	
Aquifi Inc. <i>Deep Learning and Computer Vision Engineer</i>	Palo Alto, California 2018/11–2019/10
Implemented deep learning systems for anomaly detection on multi-view structured input images on highly imbalanced datasets using state of the art, and implementing custom CNNs. Worked with a variety of tools, including Python, TensorFlow and C++ as well as html, javascript and css for experiments visualizations.	

Publications

Workshop: G. Camporese, E. Izzo, L. Ballan, "Where are my Neighbors? Exploiting Patches Relations in Self-Supervised Vision Transformer", Computer Vision and Pattern Recognition, New Orleans, 2022. (CVPRW 2022).

Workshop: N. Osman, G. Camporese, P. Coscia, L. Ballan, "SlowFast Rolling-Unrolling LSTMs for Action Anticipation in Egocentric Videos", International Conference on Computer Vision, Virtual, 2021. (ICCVW 2021).

Conference: Y. Guo, G. Camporese, W. Yang, A. Sperduti, L. Ballan, "Conditional Variational Capsule Network for Open Set Recognition", International Conference on Computer Vision, Virtual, 2021. (ICCV 2021).

Conference: V. Mendelev, T. Raissi, G. Camporese, M. Gollo, "Improved Robustness to Disfluencies in RNN-Transducer Based Speech Recognition", International Conference on Acoustics, Speech and Signal Processing, Toronto, Canada, 2021. (ICASSP 2021).

Conference: G. Camporese, P. Coscia, A. Furnari, G. M. Farinella, L. Ballan, "Knowledge Distillation for Action Anticipation via Label Smoothing", International Conference on Pattern Recognition, Milan, Italy, 2020. (ICPR 2020).

Thesis

MS: "Semantic Segmentation for Visual Inspection." Supervisor: Pietro Zanuttigh
BS: "Algorithms for Sound Synthesis through Physical Modeling". Supervisor: Federico Avanzini

Selected MS Projects

Learning Invariances in Speech Recognition. [\[github\]](#)
Speech Recognition with CNNs and data augmentation.

Speech Classification, a dictionary approach with MFCC and Dynamic Time Warping [\[link\]](#)
Classification of audio commands using dynamic time warping.

A Deep Introspection on Generative Adversarial Networks [\[github\]](#)
Study and implementation of a GAN with Goodfellow's approach.

Text Mining Complex Network [\[link\]](#)
Mining of context informations from a wikipedia web page through the complex network theory.

Computer Skills

Languages and Tools for Machine Learning and Computer Vision: Python, PyTorch, PyTorch Lightning, TensorFlow, NumPy, Keras, OpenCV, Scikit-learn, Pandas, Matplotlib

Other Languages and Tools: Git, HTML, Flask, C/C++, Javascript, Matlab, Mathematica, Arduino

Languages

Italian: Mother tongue
English: Professional knowledge

Extra

2019: Fundamentals of Reinforcement Learning, *Coursera*

2018: Deep Learning Specialization, *Coursera*

2018: Sequence Models, *Coursera*

2017: Convolutional Neural Networks, *Coursera*

2017: Structuring Machine Learning Projects, *Coursera*

2017: Improving Deep Neural Networks: Hyperparameter tuning, Regularization and Optimization, *Coursera*

2017: Neural Networks and Deep Learning, *Coursera*
2011: Diploma in Music Theory, *Conservatory Giuseppe Tartini*, Trieste

Side Experience

Math/Physics Tutor <i>Private lessons</i>	Padova, Italy <i>2016–2018</i>
Piano Teacher <i>La Casa Della Musica</i>	Padova, Italy <i>2016–2017</i>

Interests

- Deep learning, machine learning, computer vision, piano, guitar, electronic music production