Curriculum vitae

Guglielmo Camporese

(pron. gool-yell-moe)

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Personal

Birth	Camposampiero (PD), Italy, on March 8th 1993. Italian citizen. Male.
Cur. Loc.	Grosswiesenstrasse 87, 8051 Zürich, Switzerland
Residence	Via Santa Caterina 4 Interno 1, 35121 Padova, Italy
Mobile	**(IT)** +39 340 6738579 - **(CH)** +41 078 253 07 22
Email	guglielmocamporese@gmail.com
Website	guglielmocamporese.github.io
Linkedin	linkedin.com/in/guglielmocamporese
GitHub	github.com/guglielmocamporese

Work Experience

04-07/2023 **Research Scientist Intern**
Disney Research Studios - Zürich, Switzerland
Working on transfer learning, knowledge distillation, model compression.

12/2021 -
09/2022 **Applied Scientist Intern**
Amazon Web Services AI Labs - Seattle, Washington
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.

06-09/2020 **Applied Scientist Intern**
Amazon Alexa AI - Turin, Italy
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 modeling of particular speech disorders, mining relevant datasets, designing and training neural network architectures, and delivering high-quality results.

11/2018 -
10/2019 **Deep Learning and Computer Vision Engineer**
Aquifi Inc. - Palo Alto, California
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 experiment visualizations.

Education

10/2019 -
02/2023 **Ph.D. in Brain, Mind and Computer Science**
University of Padova, Department of Mathematics and Psychology - Padova, Italy
Thesis: Prediction of Activities and Visual Concepts Under Complex and Changing Conditions
Supervisor: Lamberto Ballan - **Co-supervisor:** Gianluca Campana

2016 - 2019	**M.Sc. in Telecommunications Engineering, 110/110 e Lode**
	University of Padova, Department of Information Engineering - Padova, Italy
	Thesis: Semantic Segmentation for Visual Inspection
	Supervisor: Pietro Zanuttigh
2012 - 2016	**B.Sc. in Information Engineering**
	University of Padova, Department of Information Engineering - Padova, Italy
	Thesis: Algorithms for Sound Synthesis through Physical Modeling
	Supervisor: Federico Avanzini
2007 - 2012	**Scientific High School Diploma**
	Liceo Scientifico "Ettore Majorana" - Mirano, Venezia, Italy

Academic Work Experience

2020 - 2021	**Teacher Assistant**
	University of Padova - Padova, Italy
	Teacher assistant for the machine learning class in the Data Science Master Degree. In particular, I lectured class lessons, prepared the laboratories, and I supervised and evaluated the students for their final project of the course.
2019 - 2023	**Thesis Co-Supervisor**
	University of Padova - Padova, Italy
	During my Ph.D. I co-supervised 9 Master Students (from the Computer Science and Data Science degree) and 1 Bachelor Student (from the Computer Science degree) in their final thesis.
2019 - 2023	**Service**
	I served as a reviewer in top venues such as: ICCV-2023, CVPR-2023, TPAMI-2022, CVPR-2021, ICPR-2020.

Publications

Conference	N. Osman, **G. Camporese**, L. Ballan, "TAMFormer: Multi-Modal Transformer with Learned Attention Mask for Early Intent Prediction ", International Conf. on Acoustics, Speech and Signal Processing, Rhodes Island, Greece, 2023. [oral] (ICASSP 2023).
Conference	**G. Camporese**, E. Izzo, L. Ballan, "Where are my Neighbors? Exploiting Patches Relations in Self-Supervised Vision Transformer", British Machine Vision Conference, London, UK, 2022. [oral spotlight] (BMVC 2022). (previously selected as oral splotlight at the "Transformers for Vision Workshop (T4V)" at CVPR 2022, New Orleans, Louisiana.)
Conference	N. Osman, E. Cancelli, **G. Camporese**, P. Coscia, L. Ballan, "Early Pedestrian Intent Prediction via Features Estimation", IEEE International Conference on Image Processing, Bordeaux, France, 2022. (ICIP 2022)
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	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	V. Mendelev*, T. Raissi*, **G. Camporese**, M. Giollo, "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).
Ph.D. Thesis	**G. Camporese**, "Prediction of Activities and Visual Concepts Under Complex and Changing Conditions".
Ms.C. Thesis	**G. Camporese**, "Semantic Segmentation for Visual Inspection".
Bs.C. Thesis	**G. Camporese**, "Algorithms for Sound Synthesis through Physical Modeling".

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	Full professional proficiency
French	Basic

Extra

2019	**Certification** - Fundamentals of Reinforcement Learning, *Coursera*
2018	**Certification** - Deep Learning Specialization, *Coursera*
2018	**Certification** - Sequence Models, *Coursera*
2017	**Certification** - Convolutional Neural Networks, *Coursera*
2017	**Certification** - Structuring Machine Learning Projects, *Coursera*
2017	**Certification** - Improving Deep Neural Networks: Hyperparameter tuning, Regularization and Optimization, *Coursera*
2017	**Certification** - Neural Networks and Deep Learning, *Coursera*
2011	**Diploma** - Diploma in Music Theory, *Conservatory Giuseppe Tartini*, Trieste

Side Experience

2016 - 2018	**Math/Physics Tutor**, *Private lessons* - Padova, Italy
2016 - 2017	**Piano Teacher**, *La Casa Della Musica* - Padova, Italy

Interests

Deep learning, machine learning, computer vision, playing piano, guitar and synths, pruducing electronic music.