

Curriculum vitae

Guglielmo Camporese

(pron. gool-yell-moe)

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Personal

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

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GitHub: <https://github.com/guglielmocamporese>

Work Experience

Amazon Web Services AI Labs <i>Applied Science Intern</i>	Seattle, Washington 2021/12–2022/09
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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 Alexa AI <i>Applied Science Intern</i>	Turin, Italy 2020/06–2020/09
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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.

Aquifi Inc. <i>Deep Learning and Computer Vision Engineer</i>	Palo Alto, California 2018/11–2019/10
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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

Ph.D. Student in Brain Mind and Computer Science <i>University of Padova, Department of Mathematics and Psychology</i>	Padova, Italy 2019–2023 (expected)
MS degree in Telecommunications Engineering, 110/110 e Lode <i>University of Padova, Department of Information Engineering</i>	Padova, Italy 2016–2019
BS degree in Information Engineering <i>University of Padova, Department of Information Engineering</i>	Padova, Italy 2012–2016
Scientific High School <i>Liceo Scientifico "Ettore Majorana"</i>	Mirano, Venezia, Italy 2007–2012

Academic Work Experience

University of Padova **Padova, Italy**
Teacher Assistant *2020/03–2021/03*

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.

University of Padova **Padova, Italy**
Thesis Co-Supervisor *2019/09–2023/02*

During my PhD 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.

Service: I served as a reviewer in top venues such as: ICCV-2023, CVPR-2023, CVPR-2021, ICPR-2020.

Publications

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 spotlight 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)

Preprint: N. Osman, G. Camporese, L. Ballan, "TAMFormer: Multi-Modal Transformer with Learned Attention Mask for Early Intent Prediction ", arXiv 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).

Thesis

PhD: "Prediction of Activities and Visual Concepts Under Complex and Changing Conditions". Supervisor: Lamberto Ballan, Co-Supervisor: Gianluca Campana

MS: "Semantic Segmentation for Visual Inspection". Supervisor: Pietro Zanuttigh

BS: "Algorithms for Sound Synthesis through Physical Modeling". Supervisor: Federico Avanzini

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

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

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, playing piano, guitar and synths, pruding electronic music.