Massimiliano Mancini

Ph.D. student in Engineering in Computer Science
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Education

Master of Science in Artificial Intelligence and Robotics
Sapienza University of Rome (Rome, Italy)   October 2014 - October 2016
Supervisor: Prof. Barbara Caputo
Thesis title: *Deep Naïve Bayes Nearest Neighbor.*
Grade: 110/110 cum laude and excellence mention.

Bachelor degree in Computer and Electronic Engineering
University of Perugia (Perugia, Italy)   October 2010 - May 2014
Supervisor: Prof. Emilio Di Giacomo
Thesis title: *Project and realization of a software system for the use of a mobile device as a webcam for computer.*
Grade: 101/110.

Ph.D. Schools

International Computer Vision Summer School   July 2018
Scicli, Italy
Organizers: Prof. Roberto Cipolla (University of Cambridge, UK), Prof. Sebastiano Battiato (Unviersity of Catania, Italy), Prof. Giovanni Maria Farinella (University of Catania, Italy)

Regularization Methods for Machine Learning   June 27th - July 1st 2017
Genova, Italy
Organizers: Dr. Alessandro Rudi (University of Genova, Italy), Raffaello Camoriano (Italian Institute of Technology and University of Genova, Italy), Dr. Silvia Villa (Italian Institute of Technology, Italy)

Visiting Research Periods

Visiting Ph.D. Student   Summer 2018
Robotics Perception and Learning laboratory (RPL)
KTH Royal Institute of Technology (Stockholm, Sweden)
Supervisors: Dr. Hakan Karaoguz, Prof. Patric Jensfelt
Main topic: Development of an online incremental class learning algorithm for deep learning detection architectures on a YuMi robotic platform.

Other Research Experiences

Technologies of Vision laboratory (TeV)   January 2017 - present
Fondazione Bruno Kessler (Trento, Italy)

Position: Research Collaborator
Main topic: Improving Generalization and Robustness of Convolutional Neural Networks.

Visual and Multimodal Applied Learning (VANDAL)   May 2019 - present
Istituto Italiano di Tecnologia (Turin, Italy)
Position: Research Collaborator
Main topic: Incremental Class Learning.

Technologies of Vision laboratory (TeV)   July 2016 - September 2016
Fondazione Bruno Kessler (Trento, Italy)
Position: Intern
Supervisor: Prof. Elisa Ricci
Main topic: End-to-end training of Convolutional Neural Networks for Scene Recognition using a Nave Bayes Nearest Neighbor based classifier.

Linguistic Computing Laboratory (LCL)   October 2015 - March 2016
Sapienza University of Rome (Rome, Italy)
Position: Master Student
Supervisor: Prof. Roberto Navigli
Main topic: Development of an algorithm for simultaneously producing word and sense embeddings from text corpora.

Publications

2019

M. Mancini, L. Porzi, F. Cermelli, B. Caputo
Discovering Latent Domains for Unsupervised Domain Adaptation Through Consistency
International Conference on Image Analysis and Processing (ICIAP) 2019.

L. O. Vasconcelos, M. Mancini, D. Boscaini, B. Caputo, E. Ricci
Structured Domain Adaptation for 3D Keypoint Estimation
International Conference on 3D Vision (3DV) 2019. (**oral**)

M. Mancini, L. Porzi, S. Rota Bulò, B. Caputo, E. Ricci
Inferring Latent Domains for Unsupervised Deep Domain Adaptation
IEEE Transactions on Pattern Analysis & Machine Intelligence 2019.

F. Cermelli, M. Mancini, E. Ricci, B. Caputo
The RGB-D Triathlon: Towards Agile Visual Toolboxes for Robots
IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS) 2019.

M. Mancini, L. Porzi, F. Cermelli, B. Caputo
Discovering Latent Domains for Unsupervised Domain Adaptation through Consistency
International Conference on Image Analysis and Processing (ICIAP) 2019.

M. Mancini, S. Rota Bulò, B. Caputo, E. Ricci
AdaGraph: Unifying Predictive and Continuous Domain Adaptation through Graphs
IEEE/CVF Computer Vision and Pattern Recognition (CVPR) 2019. (**oral**)

M. Mancini, H. Karaoguz, E. Ricci, P. Jensfelt, B. Caputo
Knowledge is Never Enough: Towards Web Aided Deep Open World Recognition
IEEE International Conference on Robotics and Automation (ICRA) 2019.

2018

M. Mancini, E.Ricci, B. Caputo, S. Rota Bulò
Adding New Tasks to a Single Network with Weight Transformations using Binary Masks
ECCV Workshop on Transferring and Adapting Source Knowledge in Computer Vision 2018. **(best paper award honorable mention)**

M. Mancini, H. Karaoguz, E. Ricci, P. Jensfelt, B. Caputo
Kitting in the Wild through Online Domain Adaptation
IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS) 2018.

M. Mancini, S. Rota Bulò, B. Caputo, E. Ricci
Best sources forward: domain generalization through source-specific nets
IEEE International Conference on Image Processing (ICIP) 2018.

M. Mancini, L. Porzi, S. Rota Bulò, B. Caputo, E. Ricci
Boosting Domain Adaptation by Discovering Latent Domains
IEEE Computer Vision and Pattern Recognition (CVPR) 2018. **(spotlight)**

M. Mancini, S. Rota Bulò, B. Caputo, E. Ricci
Robust Place Categorization with Deep Domain Generalization
IEEE Robotics and Automation Letters, July 2018, vol. 3, n. 3., pp. 2093-2100.

2017

M. Mancini, S. Rota Bulò, E. Ricci, B. Caputo
Learning Deep NBNN Representations for Robust Place Categorization
IEEE Robotics and Automation Letters, May 2017, vol. 3, n. 2., pp. 1794-1801.
Presented at IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS) 2017.

M. Mancini, J. Camacho-Collados, I. Iacobacci, R. Navigli
Embedding Words and Senses together via Joint Knowledge-Enhanced Training
Proceedings of the SIGNLL Conference on Computational Natural Language Learning (CoNLL) 2017, pp. 100-111.

Awards and Acknowledgements

Acknowledged outstanding reviewer
- IEEE/CVF International Conference on Computer Vision (ICCV) 2019
- IEEE/CVF International Conference on Computer Vision and Pattern Recognition (CVPR) 2019
- Pattern Recognition

Best Paper Award Honorable mention   September 2018
ECCV Workshop on Transferring and Adapting Source Knowledge in Computer Vision (Munich, Germany)

For the work *Adding New Tasks to a Single Network with Weight Transformations using Binary Masks.*

Reading Group Competition Winner   July 2017
International Computer Vision Summer School 2018 (Scicli, Italy)
Member of the winning team of the reading group competition, with Julian Zilly, Amit Boyarski, Micael Carvalho, Amir Atapour Abarghouei, Konstantinos Amplianitis, Aleksandr Krasnov, Hernn Gonzalez, Riccardo Spezialetti, Carlos Sampedro Prez.

Excellent graduate student   May 2017
Sapienza University of Rome (Rome, Italy)
Award given to the best graduated students of the year.

Services

Conferences:
- Publicity/Web Chair International Conference on Image Analysis and Processing (ICIAP) 2019

Organizers of the following tutorials:
- Transferring Knowledge Across Domains: an Introduction to Deep Domain Adaptation (in ICIAP 2019)

Reviewer for the following journals:
- IEEE Transactions on Multimedia
- IET Computer Vision
- International Journal of Machine Learning and Cybernetics
- Pattern Recognition
- IEEE Robotics and Automation Letters

Reviewer for the following conferences:
- IEEE International Conference on Robotics and Automation (ICRA) 2018-2019
- ACM Multimedia Conference (ACM-MM) 2018
- IEEE/CVF International Conference on Computer Vision and Pattern Recognition (CVPR) 2019-2020
- IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS) 2019
- IEEE International Conference on Computer Vision (ICCV) 2019
- Annual Conference on Neural Information Processing Systems (NeurIPS) 2019
- AAAI Conference on Artificial Intelligence (AAAI) 2020

Student Volunteer for:
- IEEE International Conference on Computer Vision (ICCV) 2017

Skills

Languages
- Italian (mother tongue)
- English (professional proficiency)

Programming
- Proficiency with: Caffe, Python, PyTorch
- Experience with: Android SDK, C, C++, Java, Keras, MATLAB, OpenGL, Prolog

Other Activities

Volunteer tourist service
Palazzo Bourbon del Monte
Monte Santa Maria Tiberina (Perugia, Italy)
Summers 2010-2015.

Trento (Italy), September 2019