

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 (University 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 - January 2020

Fondazione Bruno Kessler (Trento, Italy)

Position: Research Collaborator

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

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: 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, 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

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.

Acknowledged outstanding reviewer

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

Services

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

- IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS) 2019
- IEEE International Conference on Computer Vision (ICCV) 2019

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), June 2019