Andrea Palazzi

Deep Learning and Computer Vision Craftsman

Skills

Languages Python, Matlab, C++. Git.

Libraries PyTorch, TensorFlow, Keras, OpenCV, Pandas

Domains Deep Learning, Machine Learning, Computer Vision

Work Experience

Mar 2020 - ongoing **Senior Deep Learning Engineer**, *Nomitri GmbH*, Berlin (Germany).
I work in the Machine Learning (ML) team, where deliver to the other teams the machine learning models on which all company products are grounded.
My work spans over different areas:
- All phases of models life cycle: problem framing, data collection, model design, training and validation; finally quantization for on-device deployment.
- Design, development and maintenance of the internal deep learning software infrastructure as well as of its continuous integration (CI) pipelines.
- Data-oriented tasks, e.g. data wrangling and dataset exploration, interface with SQL database, quality inspection for data coming from annotation providers.

May 2018 - Aug 2018 **Applied Scientist Intern**, *Amazon*, Berlin (Germany).
I joined the computer vision team to work on an exploratory research project on weakly-supervised instance level segmentation

Sep 2015 - Oct 2016 **Research Fellow**, *University of Modena and Reggio Emilia*, (Italy).
Collaborating with the department of human sciences, I designed and implemented a video analysis pipeline to detect the presence of hidden biases in social interactions from people's nonverbal behaviors.

Jan 2015 - Sep 2016 **Software Engineer**, *Expert System*, Modena (Italy).
As part of my thesis project, I built a software prototype to automatically identify changes and emerging trends in the use of words over time through text data mining on web-scraped documents corpora.

Education

2016 - 2020 **PhD Computer Vision**, *University of Modena and Reggio Emilia*, (Italy),
Supervisor: Prof. Rita Cucchiara. Thesis title: *Smart Cities: Bridging Driver's, Vehicle and Infrastructure Viewpoints*.
- **Research topics**: driver's gaze prediction, image and video saliency, synthetic data, differentiable rendering, object pose estimation, image generation.
- **Teaching activities**: laboratory lecturer for the MSc courses of *Machine Learning and Pattern Recognition*, *Computer Vision* and *AI and machine learning for automotive*. Lecturer for the *Deep Learning* course for the Master in Visual Computing.

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2012 - 2015 **MSc Computer Engineering**, *University of Modena and Reggio Emilia*, (Italy), 110/110 cum laude.
Thesis title: Automatic identification of emerging trends via text data mining.

2009 - 2012 **BSc Computer Engineering**, *University of Modena and Reggio Emilia*, (Italy).
Thesis title: Design and engineering of an Arduino-controlled robotic arm.

Languages

Italian **Mothertongue**
English **Proficient**
German **Basic**
French **Basic**

Selected Publications

Complete list on Google Scholar.

2019 **Warp and Learn: Novel Views Generation for Vehicles and Other Objects**, *Palazzi, A., Bergamini, L., Calderara, S. & Cucchiara, R.*, in IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI).

2019 **Segmentation Guided Scoring of Pathological Lesions in Swines Through Convolutional Neural Networks**, *Bergamini, L., Trachtman, Abigail Rose, Palazzi, A. et al*, In International Conference on Image Analysis and Processing (ICIAP).

2018 **End-to-end 6-DoF Object Pose Estimation through Differentiable Rasterization**, *Palazzi, A., Bergamini, L., Calderara, S. & Cucchiara, R*, In ECCVW.

2018 **Learning to Detect and Track Visible and Occluded Body Joints in a Virtual World**, *Fabbri, M., Lanzi, F., Calderara, S. Palazzi, A., Vezzani, R., & Cucchiara, R*, In European Conference of Computer Vision (ECCV).

2017 **Predicting the Driver's Focus of Attention: the DR(eye)VE Project**, *Palazzi, A., Abati, D., Calderara, S., Solera, F., & Cucchiara, R*, Transactions on Pattern Analysis and Machine Intelligence (TPAMI).

2017 **Learning to Map Vehicles into Bird's Eye View**, *Palazzi, A., Borghi, G., Abati, D., Calderara, S., & Cucchiara, R*, In International Conference on Image Analysis and Processing (ICIAP).

2017 **Learning Where to Attend Like a Human Driver**, *Palazzi, A., Solera, F., Calderara, S., Alletto, S., & Cucchiara, R*, In Intelligent Vehicles Symposium (IV).

2016 **Spotting prejudice with nonverbal behaviours**, *Palazzi, A., Calderara, S., Bicocchi, N., Vezzali, L., di Bernardo, G. A., Zambonelli, F., & Cucchiara, R*, In Proceedings of the ACM UbiComp.

2016 **Dr (Eye)Ve: A dataset for attention-based tasks with applications to autonomous and assisted driving**, *Alletto, S., Palazzi, A., Solera, F., Calderara, S., & Cucchiara, R*, In Proceedings of IEEE CVPRW.