Filippo Aleotti

Bentivoglio (Bo), 29/09/1993
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Current position

I'm currently pursuing the first year of the PhD course ***Structural and Environmental Health Monitoring and Management*** **(SEHM2)** of the ***Computer Science and Engineering*** **(DISI)** department at **Alma Mater Studiorum,** University of Bologna**.**

My research project concerns on ***Depth Reconstruction from monocular cameras***, and specifically its purpose is to study and develop methodologies to infer depth measurements directly from the images.

My research interest concerns the Computer Vision and Embedded Computer Vision, 3D sensing, Machine Learning and Deep Learning.

Scholar

Master Degree

Alma Mater Studiorum - University of Bologna, Engineering and Architecture School, Computer Science

Title of the thesis: *Adversarial Learning for monocular depth prediction*

Subject: Reconfigurable Logic M

Advisor: Mattoccia Stefano

Graduation score: 110/110 cum laude

Date: 15/03/2018

Bachelor Degree

Alma Mater Studiorum - University of Bologna, Engineering and Architecture School, Computer Science

Title of the thesis: *SLAM system on Nvidia TK1 platform*

Subject: Computer architectures T

Advisor: Mattoccia Stefano

Graduation score: 110/110 cum laude

Date: 12/10/2015

Programming Languages

Java: ★★★★
C: ★★★
Javascript: ★★★
Python: ★★★★★
C#: ★★★★

Frameworks

TensorFlow: ★★★★
PyTorch: ★★★★
OpenCV: ★★★★

Code

https://github.com/FilippoAleotti
https://vision.disi.unibo.it/~faleotti/

Languages

English: ★★★★

Publications

[1] M. Poggi, F. Aleotti, F. Tosi, S. Mattoccia, "Towards real-time unsupervised monocular depth estimation on CPU", IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS 2018), October 1-5, 2018, Madrid, Spain

[2] F. Aleotti, F. Tosi, M. Poggi, S. Mattoccia, "Generative Adversarial Networks for unsupervised monocular depth prediction", 3D Reconstruction in the Wild 2018 (3DRW2018), in conjunction with (ECCV 2018), Munich, Germany, September 14, 2018

[3] F.Tosi, F. Aleotti, M. Poggi, S. Mattoccia, "Learning monocular depth estimation infusing traditional stereo knowledge", CVF/IEEE Conference on Computer Vision and Pattern Recognition (CVPR)

[4] F. Aleotti, M. Poggi, F.Tosi and S. Mattoccia, "Learning end-to-end scene flow by distilling single tasks knowledge", 34th AAAI Conference on Artificial Intelligence, New York, US, February 7-12, 2020

Under Review papers

[1] M. Poggi, F. Tosi, F. Aleotti, S. Mattoccia, "Real-time monocular depth estimation without GPU", **under review** at IEEE Transaction On Cybernetics

[2] V. Peluso, A. Cipolletta, A. Calimera, M. Poggi, F. Tosi, F. Aleotti, S. Mattoccia, "Monocular Depth Perception on Microcontrollers", **under review** at IEEE Transaction On Circuits and Systems for Video Technology

Demos and Talks

- "Real-Time Monocular Depth Estimation Without GPU", Demo at Computer Vision and Pattern Recognition 2019, Long Beach, California
- "Scene Flow estimation with Deep Learning", Master at Sustainable and Integrated Mobility in Urban Regions, Imola, Bologna

Didactics

- Tutor of the course "Foundations of Informatics P2", Mechatronics Engineering (University of Bologna) for the academic year 2018/2019