Simon Meister

Research Interests

Deep Reinforcement Learning

My primary research goal is building intelligent systems to learn and act in complex environments. To this end, i am interested in deep reinforcement learning, and sequential decision making in general. Currently, i am working on deep reinforcement learning for challenging video games (e.g. StarCraft II) at the Autonomous Systems Labs, TU Darmstadt.

Deep Learning

I am broadly interested in deep learning foundations and applications. Thus far, i have worked on end-to-end deep learning for computer vision, particularly for motion estimation [1] and object detection. In the future, i want to focus on advancing deep learning beyond perception-only tasks and researching more biologically plausible learning architectures and algorithms.

Education

2014-Present B.Sc., Computer Science, Technische Universität Darmstadt, Germany.

Expected graduation: March 2018

Future M.Sc., Visual Computing, Technische Universität Darmstadt, Germany.

Expected starting date: April 2018

Publications

Peer-Reviewed Conference Papers

[1] S. Meister, J. Hur, and S. Roth. UnFlow: Unsupervised Learning of Optical Flow with a Bidirectional Census Loss. In AAAI Conference on Artificial Intelligence (AAAI), New Orleans, Louisiana, Feb. 2018. **Oral presentation**. GitHub.

Bachelor thesis

title Motion R-CNN: Instance-level 3D Motion Estimation with Region-based CNNs

supervisors Professor Stefan Roth & M.Sc. Junhwa Hur

Honors & Awards

2013 Christian Ernst Neeff-Preis, Physikalischer Verein Frankfurt.

Awarded for work on massively parallel physics simulation conducted during the "Jugend forscht" youth science competition (national level).

Technical Experience

Advanced Python, NumPy, C, C++, TensorFlow, PyTorch, Linux, Git, JavaScript

Intermediate LATEX, CUDA, OpenGL, Matlab, Java, Clojure

Biographic Information

Languages English (fluent), German (native)

Formative Courses

Technische Universität Darmstadt

Grading scheme: 1.0 (best) - 4.0 (pass)

Statistical Machine Learning (1.0), Computer Vision 1 (1.0), Project Lab Deep Learning for Computer Vision (1.0), Deep Learning for Natural Language Processing (1.7), Robot Learning (ongoing), Integrated Project Robot Learning (ongoing)

Online

Machine Learning, Andrew Ng, Stanford University.