Tom Runia

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PhD candidate, QUVA Deep Vision Lab
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Education

University of Amsterdam — Amsterdam, The Netherlands
PhD candidate in Computer Science — since Feb 2016
Advisors: Cees Snoek, Arnold Smeulders

Delft University of Technology — Delft, The Netherlands
MSc. in Computer Science — Aug 2013 – Aug 2015
Graduated with distinction

Delft University of Technology — Delft, The Netherlands
BSc. in Applied Physics — Aug 2008 – Jun 2012

Professional Experience

Research Intern (Amazon.com) — Seattle, USA
Summer internship at Amazon AI — Jun 2019 – Sep 2019
Research on unsupervised video representation learning using bidirectional GANs.

Research Intern (TomTom) — Eindhoven, The Netherlands
Internship in the Autonomous Driving team — Nov 2014 – Aug 2015
Research on high-speed objection detection with feature boosting for embedded devices.

Software Engineer (Dept) — Delft, The Netherlands
Part-time software engineer during my MSc. study — Oct 2013 – Apr 2015

Research Assistant (Delft Univ. of Technology) — Delft, The Netherlands
Software engineer in the Quantitative Imaging group — Jun 2012 – Oct 2012

Publications

- **T.F.H. Runia**, A. Berneshawi, R. Rama Varior, U. Bücher, D. Modolo, J. Tighe. Bidirectional GANs for Unsupervised Video Representation Learning. *Under Review*, 2019.
- **T.F.H. Runia**, K. Gavrilyuk, C.G.M. Snoek, A.W.M. Smeulders. Never Seen Physical Measurements through Simulations: A Case Study of Cloth in the Wind. *Under Review*, 2019.
- **T.F.H. Runia**, K. Gavrilyuk, C.G.M. Snoek, A.W.M. Smeulders. Go with the Flow: Perception-refined Physics Simulation. In *arXiv Preprint*, 2019.

- **T.F.H. Runia**, C.G.M. Snoek, A.W.M. Smeulders. Repetition Estimation. In *International Journal of Computer Vision* (IJCV), 2019.
- R. Wever, **T.F.H. Runia**. Subitizing with Variational Autoencoders. In *European Conference on Computer Vision Workshops* (ECCV-W), 2018.
- **T.F.H. Runia**, C.G.M. Snoek, A.W.M. Smeulders. Real-World Repetition Estimation by Div, Grad and Curl. Spotlight presentation. In *Conference on Computer Vision and Pattern Recognition* (CVPR), 2018.
- **T.F.H. Runia**, C.G.M. Snoek, A.W.M. Smeulders. Primitive Motion Types for Learning from Instructional Video. In *Computer Vision and Pattern Recognition Workshops* (CVPR-W), 2018.
- **T.F.H. Runia**, R. Lukassen, L.Zhang, M.Loog. The System Design of a High-Speed Object Detector. In *The Dutch Conference on Computer Vision* (NCCV), 2015.

Miscellaneous

- **Teaching**
  - **Deep Learning**, Master AI course, University of Amsterdam, 2017 & 2018
  - **Information Visualization**, Bachelor AI course, University of Amsterdam, 2016
- **Thesis Supervision**
  - Erik Stammes, "Weakly-supervised Semantic Segmentation" (MSc, ongoing)
  - Danny Dijkzeul, "Unsupervised Machine Translation" (BSc, 2019)
  - Bram Kooiman, "Semi-Supervised Audio Source Separation" (MSc, 2018)
  - Rijnder Wever, "Counting with Variational Autoencoders" (BSc, 2018)
  - Matthew van Rijn, "Imitation Learning for Drones" (BSc, 2017)
  - Michelle Appel, "Bitcoin Price Prediction using RNNs" (BSc, 2017)
  - Wout Kooijman, "Bitcoin Price Prediction using RNNs" (BSc, 2017)
- **Summer Schools**
  - International Computer Vision Summer School (Italy, 2017)
  - iV&L Summer School on Language and Vision (Malta, 2016)
  - Learning from Silicon Valley (USA, 2014)
- **Reviewer Activity**
  - **Conferences:** CVPR, ECCV, ICCV, ACM-MM, ICLR, NeurIPS
  - **Journals:** TPAMI, IJCV
- **Extracurricular Activities**
  - **Board Member**, Study Association for Applied Physics, 2012 – 2013
  - **Electronic Committee**, Study Association for Applied Physics, 2009 – 2012
  - **Editor in Chief**, Study Association for Applied Physics, 2010
- **Technical Expertise**
  - **Programming languages**: Python, Java, C++, C#, R, Lua, MatLab, JavaScript, Bash
  - **Software**: PyTorch, TensorFlow, Caffe, OpenCV, Git, LaTeX, Blender, AutoDesk 3ds Max
  - **Open source contributions:** github.com/tomrunia