

# Tom Runia

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Senior Machine Learning Scientist and Manager at Apple

Personal Website: [tomrunia.github.io](https://tomrunia.github.io)

## Education

### University of Amsterdam

*PhD in Computer Science*

Advisors: Cees Snoek, Arnold Smeulders

Amsterdam, The Netherlands

Feb 2016 – May 2020

### Delft University of Technology

*MSc. in Computer Science*

Graduated with distinction

Delft, The Netherlands

Aug 2013 – Aug 2015

### Delft University of Technology

*BSc. in Applied Physics*

Delft, The Netherlands

Aug 2008 – Jun 2012

## Professional Experience

### Senior Machine Learning Scientist – Apple

*Computer Vision and Machine Learning*

Zürich, Switzerland

Jun 2020 – present

### Research Intern – Amazon

*Computer Vision internship at Amazon AI*

Seattle, USA

Jun 2019 – Sep 2019

### Research Intern – TomTom

*Computer Vision internship in the Autonomous Driving team*

Eindhoven, The Netherlands

Nov 2014 – Aug 2015

### Software Engineer – Dept

*Part-time software engineer during my MSc. study*

Delft, The Netherlands

Oct 2013 – Apr 2015

### Research Assistant – Delft Univ. of Technology

*Software engineer in the Quantitative Imaging group*

Delft, The Netherlands

Jun 2012 – Oct 2012

## Publications

- **T.F.H. Runia**, C.G.M. Snoek, A.W.M. Smeulders. Learning Physical Properties and Relationships from Visual Observations. *Under Review*, 2020.
- **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. Gavriluk, C.G.M. Snoek, A.W.M. Smeulders. Cloth in the Wind: A Case Study of Physical Measurement Through Simulation. In *Conference on Computer Vision and Pattern Recognition (CVPR)*, 2020.

- **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, 2020)
  - 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)
- **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**
  - **Outstanding Reviewer Award**: CVPR 2020
  - **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, JAX, TensorFlow, OpenCV, Git, LaTeX, Blender
  - **Open source contributions**: [github.com/tomrunia](https://github.com/tomrunia)