Thomas Marco Sutter

Curriculum Vitae

Education

2018–Present **Ph.D. in Machine Learning**, *Institute for Machine Learning*, ETH Zurich.
Supervisor: Prof. Dr. Julia E. Vogt

2011–2014 **M.Sc. in Electrical Engineering and Information Technology**, *ETH Zurich*, Zurich.
- Master Thesis: Camera based Visibility Estimation
- Semester Thesis II: Multimodal Object Detection using Hough Forests
- Semester Thesis I: Line Detection using the Hough Transform on an ASIC

2008–2011 **B.Sc. in Electrical Engineering and Information Technology**, *ETH Zurich*, Zurich.
- Bachelor Thesis: The Evolution of Cooperation

Experience

2015–2018 **R&D Software Engineer**, Logitech, Zurich.
- Consumer Video Unit
  - From November 2015 on I have been mainly working for Logitech's consumer video unit on developing and improving computer vision algorithms. The work includes various subtasks in a video analytics pipeline which involves motion estimation, as well as appearance based classification and detection methods and testing the developed methods.
- Visibility Estimation
  - From February to November 2015, I proceeded with the project on visibility estimation together with MeteoSchweiz.

2014–2015 **Project Collaborator**, upicto GmbH, Zurich.
The project was a contract by MeteoSchweiz to further improve the algorithm developed during my master thesis and productize the findings. I worked on improving the algorithm to estimate the visibility based on images, developing a rendering pipeline using openGL, programming a GUI and designing an image preprocessing pipeline to decide if an image is suitable for visibility estimation.

2010–2013 **Assistant for Event Management**, Wegelin&Co and Notenstein Private Bank, Zurich.

✉ *thomas.sutter@inf.ethz.ch* • *thomassutter*
thomasmarcosutter

Thomas Marco Sutter

Curriculum Vitae

Publications

2021 N. R. Meier, T. M. Sutter, M. Jacobsen, T. H. M. Ottenhoff, J. E. Vogt, and N. Ritz, "Machine Learning Algorithms Evaluate Immune Response to Novel Mycobacterium tuberculosis Antigens for Diagnosis of Tuberculosis," *Frontiers in Cellular and Infection Microbiology*, vol. 10, p. 821, ISSN: 2235-2988. DOI: 10.3389/fcimb.2020.594030. [Online]. Available: https://www.frontiersin.org/article/10.3389/fcimb.2020.594030.

T. M. Sutter, I. Daunhawer, and J. E. Vogt, "Generalized Multimodal ELBO," in *International Conference on Learning Representations*. [Online]. Available: https://openreview.net/forum?id=5Y21V0RDBV.

T. M. Sutter, J. A. Roth, K. Chin-Cheong, B. L. Hug, and J. E. Vogt, "A comparison of general and disease-specific machine learning models for the prediction of unplanned hospital readmissions," *J. Am. Medical Informatics Assoc.*, vol. 28, no. 4, pp. 868–873. DOI: 10.1093/jamia/ocaa299. [Online]. Available: https://doi.org/10.1093/jamia/ocaa299.

2020 K. Chin-Cheong, T. M. Sutter, and J. E. Vogt, "Generation of Differentially Private Heterogeneous Electronic Health Records," *CoRR*, vol. abs/2006.0. [Online]. Available: https://arxiv.org/abs/2006.03423.

I. Daunhawer, T. M. Sutter, R. Marcinkevics, and J. E. Vogt, "Self-supervised Disentanglement of Modality-specific and Shared Factors Improves Multimodal Generative Models," in *German Conference on Pattern Recognition*, Springer.

T. M. Sutter, I. Daunhawer, and J. E. Vogt, "Multimodal Generative Learning Utilizing Jensen-Shannon-Divergence," in *Advances in Neural Information Processing Systems*, H. Larochelle, M. Ranzato, R. Hadsell, M. F. Balcan, and H.-T. Lin, Eds., pp. 6100–6110. [Online]. Available: https://arxiv.org/abs/2006.08242.

2016 T. M. Sutter, F. Nater, and C. Sigg, "Camera Based Visibility Estimation."

✉ thomas.sutter@inf.ethz.ch • thomassutter
thomasmarcosutter

Teaching

Fall 2021	Grundlagen der Informatik (Computer Science Basics)
Spring 2021	Data Science for Medicine
Fall 2022	Grundlagen der Informatk (Computer Science Basics)
Spring 2020	Data Science for Medicine

Summer Schools

2019 **Machine Learning Summer School (MLSS)**, *Stellenbosch*, Republic of South Africa.

2018 **ESPT Summer School on Precision Medicine and Personalized Health**, *Geneva*, Switzerland.

Languages

German	**Mothertongue**	
English	**Fluent**	
French	**Intermediate**	*High School Level*
Italian	**Basic**	*Basic words and phrases only (A2)*

Reviewing

2022	International Conference on Learning Representation
2021	Neural Information Processing Systems
2020	Machine Learning for Healthcare

Programming skills

Languages	Python, C++, Matlab, R, Java
ML/DL	Pytorch, Tensorflow, Scikit-Learn, Numpy, Pandas, Sci-Py
Misc	OpenCV, OpenGL, Git

Interests

- Soccer
- Cooking
- Fashion
- Running