Edgar Schönfeld

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Research Interest

Steerable image generation, generative models, out-of-distribution generalization

Education

Saarland University — Saarbrücken, Germany
PhD Candidate in Computer Science — *Expected January 2023*

- Co-advised by Prof. Bernt Schiele and Dr. Anna Khoreva
- Research focus: image generation and semantic image synthesis with GANs, GAN steerability

University of Amsterdam — Amsterdam, Netherlands
Master of Science in Artificial Intelligence — *2016-2019*

- Focus on machine learning, computer vision and natural language processing
- MSc thesis final grade 9/10

TU Delft & Erasmus Medical Center Rotterdam — Delft/Rotterdam, Netherlands
Bachelor of Science in Nanobiology — *2013-2016*

- Honors program & cum laude (highest distinction in the Dutch system, top 5%)
- BSc thesis final grade 9/10; co-authorship in a medical publication

Research/Industry Experience

Meta Reality Labs — Zürich, Switzerland
Research Scientist — *December 2022*

Bosch Center for AI — Tübingen, Germany
Research Scientist — *September 2022 – October 2022*

- Working on applied project for synthetic data augmentation

Bosch Center for AI — Stuttgart Area, Germany
Graduate Student Researcher — *April 2019 – August 2022*

- Developing new algorithms for image generation with generative adversarial networks
- Working collaboratively with software engineers on research projects

Amsterdam Machine Learning Lab — Amsterdam, Netherlands
Research Intern, DARPA-funded — *August – December 2018*

- Publication of an algorithm for zero-shot classification
- Mentor: Prof. Zeynep Akata

Publications

- Sushko, V.*, Schönfeld, E.*, Zhang, D., Gall, J., Schiele, B., & Khoreva, A., OASIS: Only Adversarial Supervision for Semantic Image Synthesis, *IJCV 2022*
- Schönfeld, E.*, Sushko, V.*, Zhang, D., Gall, J., Schiele, B., & Khoreva, A., You Only Need Adversarial Supervision for Semantic Image Synthesis, *ICLR 2021*
- Schönfeld, E., Schiele, B., & Khoreva, A., A U-Net Based Discriminator for Generative Adversarial Networks, *CVPR 2020*
- Schönfeld, E., Ebrahimi, S., Sinha, S., Darrell, T., & Akata, Z., Generalized Zero-and Few-Shot Learning via Aligned Variational Autoencoders, *CVPR 2019*

- Schönfeld, E., Ebrahimi, S., Sinha, S., Darrell, T., & Akata, Z., Cross-Linked Variational Autoencoders for Generalized Zero-Shot Learning, *ICLR Workshop LLD 2019*
- Schönfeld, E., Ebrahimi, S., Sinha, S., Darrell, T., & Akata, Z., Generalized Zero-Shot Learning via Aligned Variational Autoencoders, *CVPR Workshop FGVC6 2019*
- Sushko, V.*, Schönfeld, E.*, Zhang, D., Gall, J., Schiele, B., & Khoreva, A., 3D Noise and Adversarial Supervision Is All You Need for Multi-Modal Semantic Image Synthesis, *ICLR Workshop SDG 2021*

Review Activities

UAI (Top Reviewer 2021), TPAMI, ICLR, ICML, NeurIPS, GCPR, ECCV, CVPR

Programming Skills

PyTorch, Python, LSF & SLURM, Linux, Git, github.com/edgarschnfld

Invited Talks

- The Power of Segmentation-Based GAN Discriminators, UCL Smart Geometry Group, London, October 2021
- U-Net Based Discriminators for Image Synthesis, TomTom, Amsterdam, November 2020

Patents

- Schönfeld, E., Khoreva A., Computer Implemented Method and Device for Classifying Data, US Patent App. 17/143,025
- Khoreva A., Zhang D., Schönfeld E., Training Method for a Generator Neural Network Imposing Data Equivariances, US Patent App. 17/149,430
- Khoreva A., Schönfeld E., Training a Generator Neural Network Using a Discriminator With Localized Distinguishing Information, US Patent App. 17/138,748

Teaching Experience

University of Amsterdam — Amsterdam, Netherlands
Teaching Assitant: Autonomous Mobile Robots — *January - March 2019*