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 September 2022

- 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

2013-2016

Bachelor of Science in Nanobiology

- 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

Bosch Center for AI

Stuttgart Area, Germany

2019 - Present

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

Amsterdam Machine Learning Lab

Amsterdam, Netherlands

• Publication of an algorithm for zero-shot classification

• Mentor: Prof. Zeynep Akata

Research Intern, DARPA-funded

August - December 2019

Publications

- 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

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

Teaching Assitant: Autonomous Mobile Robots

Amsterdam, Netherlands January - March 2019