TU Clausthal

Abschlussvortrag Masterarbeit Nour Habib

„Investigation on adversarial learning to detect anomaly in image data"

Anomaly detection is an important research field in deep learning to detect anomalies and novelty in images and videos to reduce the risk of failure in communication and data processing and ensure reliable data collection for the system. Adversarial generative learning has proven its ability to detect anomalous in images in many types of searches, with impressive results. Therefore, in this thesis, an investigation was made to explore the ability of generative adversarial networks to identify anomalies in high-resolution images that are highly complex in terms of the multiplicity of semantic categories within the images. Here, we will explore two approaches of Generative adversarial networks, DC-GAN and GANomlay. The two approaches obtained a piece of art results in detecting anomalies with simple complexity images. In this thesis, we will check the ability of the two approaches to reconstruct the normal classes of highly complex driving scenes images, besides checking the ability to classify the reconstructed images into novel images and normal images. In addition, we will apply both quantitative and qualitative evaluations of the results and provide a comparable results with referenced neural network architecture.

Betreuer der Arbeit:	Prof. Dr. Andreas Rausch, Prof. Dr. Rüdiger Ehlers
Datum:	Mittwoch, 15. März 2023, 8:30 Uhr
Ort:	Online-Meeting über BBB
	Link: https://webconf.tu-clausthal.de/b/sim-uc9-rvy