

Deep Semi-supervised anomaly detection paper presents a novel SOTA technique called Deep SAD for anomaly detection. This technique is an end-to-end methodology for for general semi-supervised anomaly detection. This method builds on the unsupervised Deep SVDD method presented in by Ruff et al. in 2019. Additionally, this technique uses labeled as well as unlabeled data.

The paper primes the Deep SAD technique with a generalized overview on the information-theoretic framework for deep anomaly detection. This framework is based on the idea that the entropy of latent distribution for normal data should be lower than the entropy of anomalous data.

Lastly, the authors compare this methodology on MNIST, fashion MNIST and Cifar-10 data set. Furthermore, the authors present a benchmark of comparisons with other deep and shallow methods.