3 Supervised AD

More Normal samples With (Less Abnormal Samples or Weak Labels)

- Neural batch sampling with reinforcement learning for semi-supervised anomaly detection [ECCV 2020]
- Explainable Deep One-Class Classification [ICLR 2020]
- Attention guided anomaly localization in images [ECCV 2020]
- Mixed supervision for surface-defect detection: From weakly to fully supervised learning [2021]
- Explainable deep few-shot anomaly detection with deviation networks [2021][code]
- Catching Both Gray and Black Swans: Open-set Supervised Anomaly Detection [CVPR 2022][code]
- Anomaly Clustering: Grouping Images into Coherent Clusters of Anomaly Types[WACV 2023]
- Prototypical Residual Networks for Anomaly Detection and Localization [CVPR 2023][code]
- Efficient Anomaly Detection with Budget Annotation Using Semi-Supervised Residual Transformer [2023]
- Anomaly Heterogeneity Learning for Open-set Supervised Anomaly Detection [2023][code]
- Few-shot defect image generation via defect-aware feature manipulation [AAAI 2023][code]
- AnomalyDiffusion: Few-Shot Anomaly Image Generation with Diffusion Model [AAAI 2024][code]
- BiaS: Incorporating Biased Knowledge to Boost Unsupervised Image Anomaly Localization [TSMC 2024]
- DMAD: Dual Memory Bank for Real-World Anomaly Detection [2024]

More Abnormal Samples

- Logit Inducing With Abnormality Capturing for Semi-Supervised Image Anomaly Detection [2022]
- An effective framework of automated visual surface defect detection for metal parts [2021]
- Interleaved Deep Artifacts-Aware Attention Mechanism for Concrete Structural Defect Classification [TIP 2021]
- Reference-based defect detection network [TIP 2021]
- Fabric defect detection using tactile information [ICRA 2021]
- A lightweight spatial and temporal multi-feature fusion network for defect detection [TIP 2020]
- SDD-CNN: Small Data-Driven Convolution Neural Networks for Subtle Roller Defect Inspection

[Robotics and Computer-Integrated Manufacturing 2020]

- A High-Efficiency Fully Convolutional Networks for Pixel-Wise Surface Defect Detection [IEEE Access 2019]
- SDD-CNN: Small Data-Driven Convolution Neural Networks for Subtle Roller Defect Inspection [Applied Sciences 2019]
- Autonomous Structural Visual Inspection Using Region-Based Deep Learning for Detecting Multiple Damage Types [CACIE 2018]
- Detection and segmentation of manufacturing defects with convolutional neural networks and transfer learning [2018]
- Automatic Metallic Surface Defect Detection and Recognition with Convolutional Neural Networks [Applied Sciences 2018]
- Real-time Detection of Steel Strip Surface Defects Based on Improved YOLO Detection Network [IFAC-PapersOnLine 2018]
- Domain adaptation for automatic OLED panel defect detection using adaptive support vector data description [IJCV 2017]
- Automatic Defect Detection of Fasteners on the Catenary Support Device Using Deep Convolutional Neural Network [TIM 2017]
- Deep Active Learning for Civil Infrastructure Defect Detection and Classification Computing in civil engineering 2017
- A fast and robust convolutional neural network-based defect detection model in product quality control [IJAMT 2017]
- Defects Detection Based on Deep Learning and Transfer Learning [Metallurgical & Mining Industry 2015]
- Design of deep convolutional neural network architectures for automated feature extraction in industrial inspection [CIRP annals 2016]
- Decision Fusion Network with Perception Fine-tuning for Defect Classification [2023]
- Global Context Aggregation Network for Lightweight Saliency Detection of Surface Defects [2023]
- Dual Attention U-Net with Feature Infusion: Pushing the Boundaries of Multiclass Defect Segmentation [2023][code]