



ANOMALIB

JAN 2025

MODELS

- EfficientAd
- Patchcore
- Padim

EFFICIENTAD

- Unsupervised method
- Primarily designed for **anomaly localization** task
- If we want to use for classification task
 - adjusting its threshold for anomaly detection
- Choosing the right threshold is critical

RESULTS OF EFFICIENTAD

EFFICIENTAD

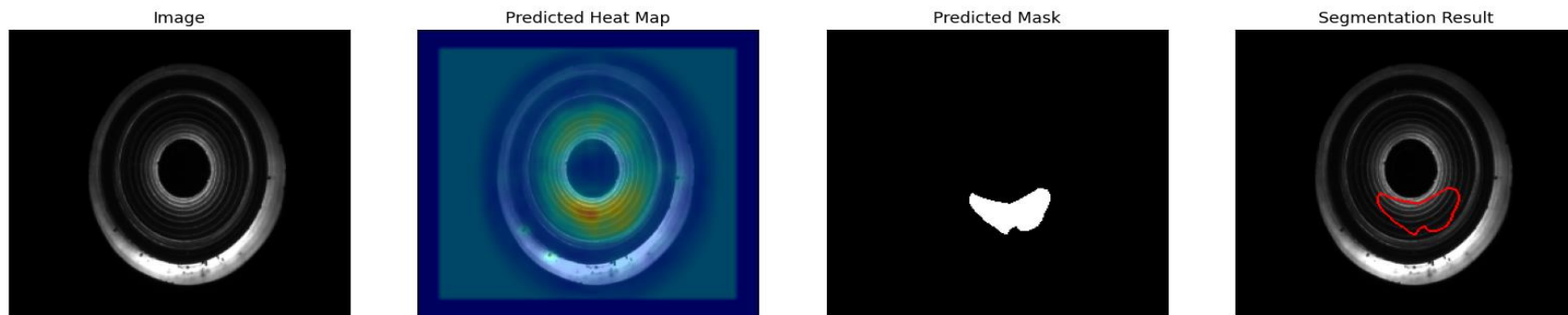
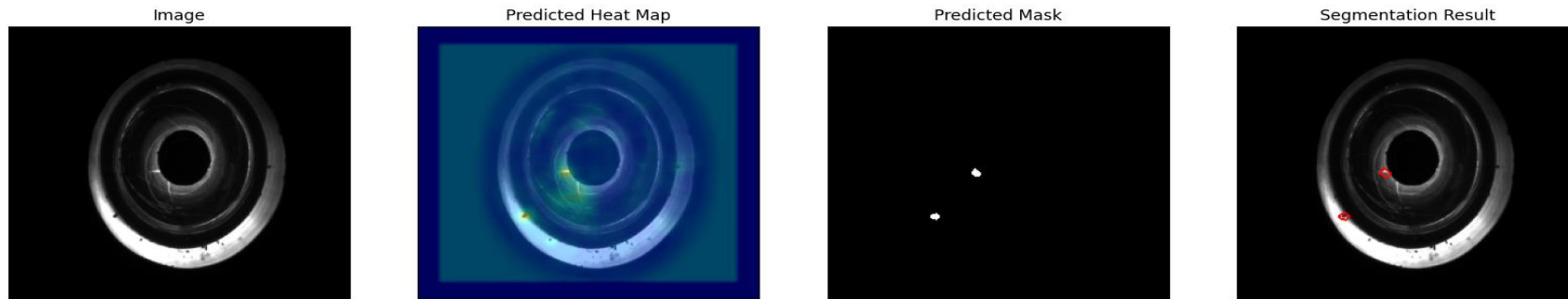
Traning for 15 epochs

	Name	Type	Params	Mode
0	model	EfficientAdModel	8.1 M	train
1	_transform	Compose	0	train
2	normalization_metrics	MetricCollection	0	train
3	image_threshold	F1AdaptiveThreshold	0	train
4	pixel_threshold	F1AdaptiveThreshold	0	train
5	image_metrics	AnomalibMetricCollection	0	train
6	pixel_metrics	AnomalibMetricCollection	0	train

Test metric	DataLoader 0
image_AUROC	0.9887481927871704
image_F1Score	0.9873417615890503

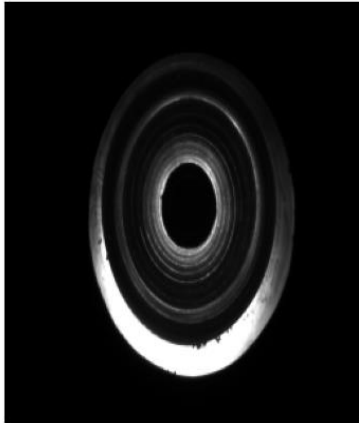
Test Results: [{'image_AUROC': 0.9887481927871704, 'image_F1Score': 0.9873417615890503}]

KO CLASS

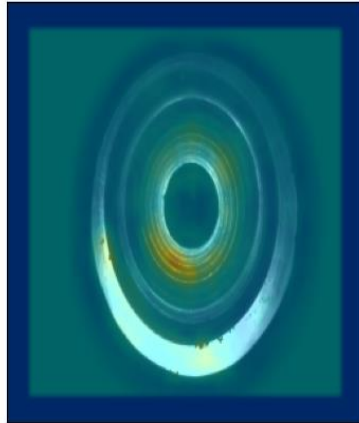


RZKO CLASS

Image



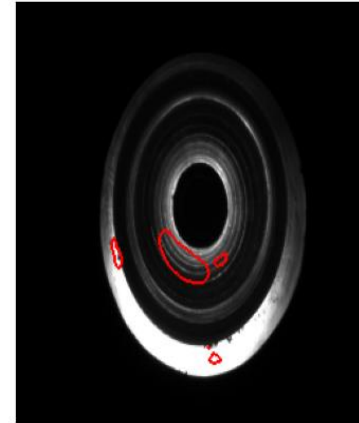
Predicted Heat Map



Predicted Mask

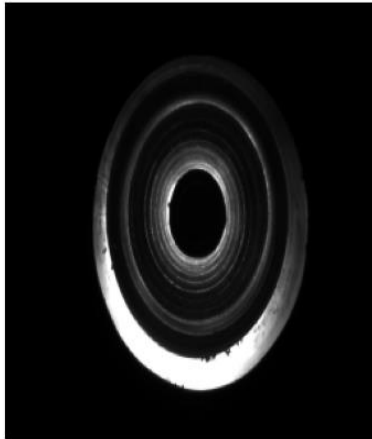


Segmentation Result

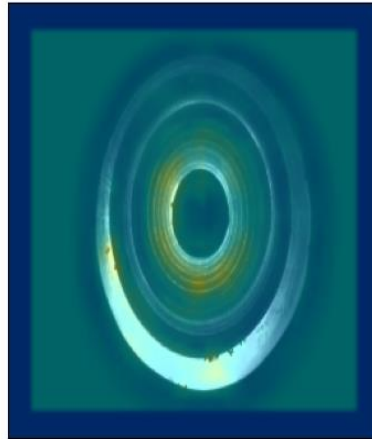


RZKO CLASS

Image



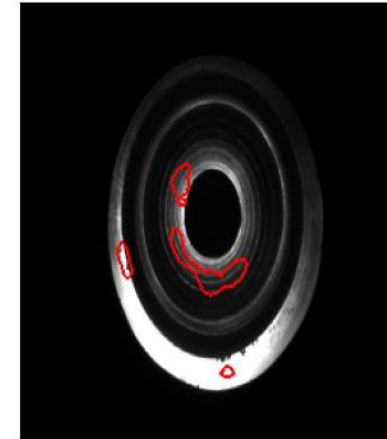
Predicted Heat Map



Predicted Mask

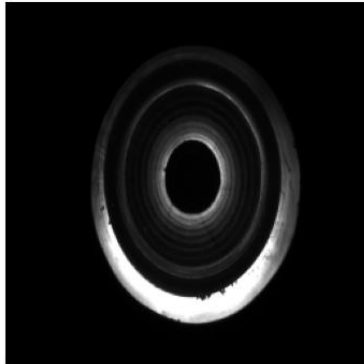


Segmentation Result

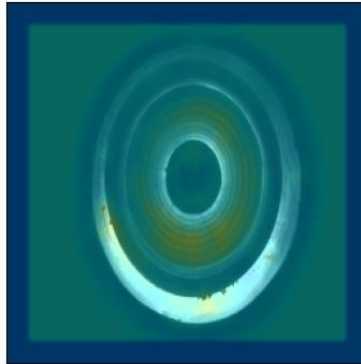


RZOK CLASS

Image



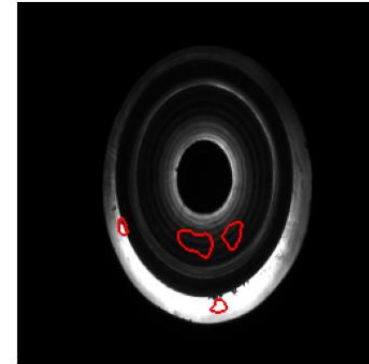
Predicted Heat Map



Predicted Mask



Segmentation Result



PATCHCORE

- Operates as an unsupervised technique
- Primarily designed for **anomaly localization** task
- For classification purposes(same as efficientAD)

RESULTS OF PATCHCORE

PATCHCORE

Traning for 15 epochs

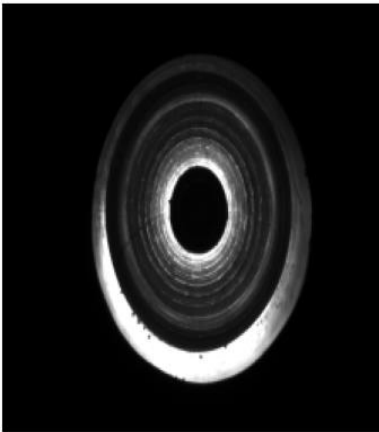
	Name	Type	Params	Mode
0	model	PatchcoreModel	24.9 M	train
1	_transform	Compose	0	train
2	normalization_metrics	MetricCollection	0	train
3	image_threshold	F1AdaptiveThreshold	0	train
4	pixel_threshold	F1AdaptiveThreshold	0	train
5	image_metrics	AnomalibMetricCollection	0	train
6	pixel_metrics	AnomalibMetricCollection	0	train

Test metric	DataLoader 0
image_AUROC	0.9985935688018799
image_F1Score	0.9673202633857727

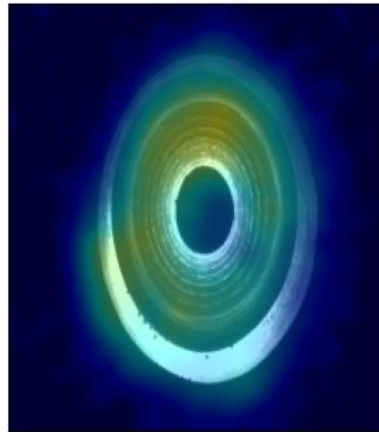
Test Results: [{'image_AUROC': 0.9985935688018799, 'image_F1Score': 0.9673202633857727}]

KO CLASS

Image



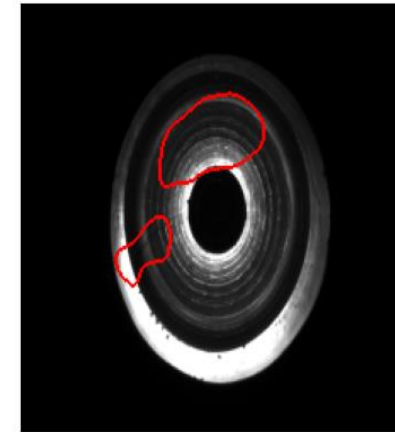
Predicted Heat Map



Predicted Mask

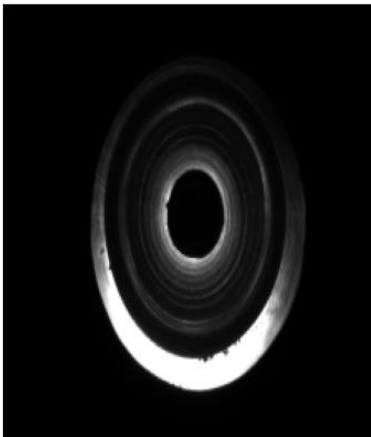


Segmentation Result

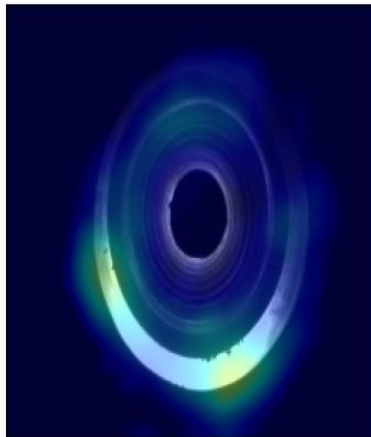


RZKO CLASS

Image



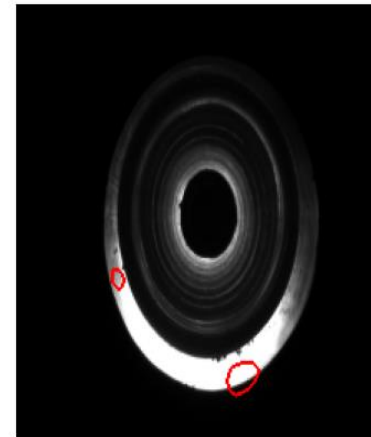
Predicted Heat Map



Predicted Mask

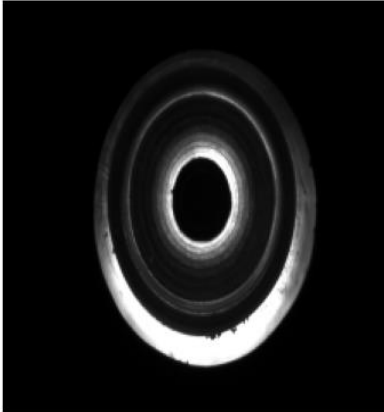


Segmentation Result

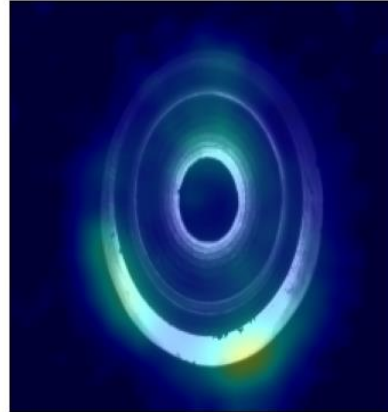


RZOK CLASS

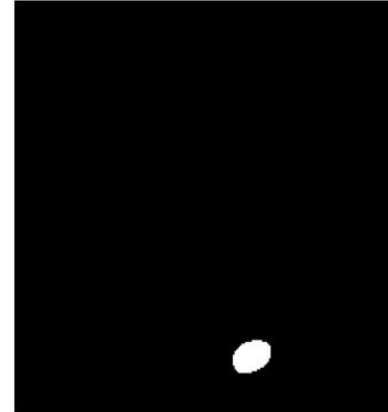
Image



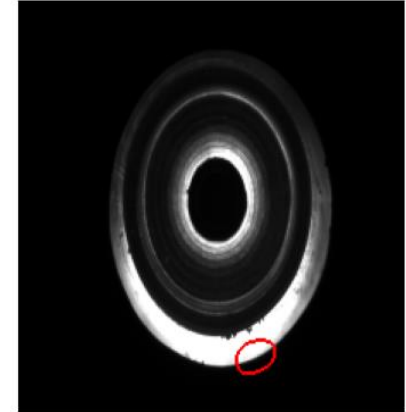
Predicted Heat Map



Predicted Mask



Segmentation Result



RESULTS OF PADIM

PADIM

- Similar to the two previous methods
- Training for 15 epochs

	Name	Type	Params	Mode
0	model	PadimModel	2.8 M	train
1	_transform	Compose	0	train
2	normalization_metrics	MetricCollection	0	train
3	image_threshold	F1AdaptiveThreshold	0	train
4	pixel_threshold	F1AdaptiveThreshold	0	train
5	image_metrics	AnomalibMetricCollection	0	train
6	pixel_metrics	AnomalibMetricCollection	0	train

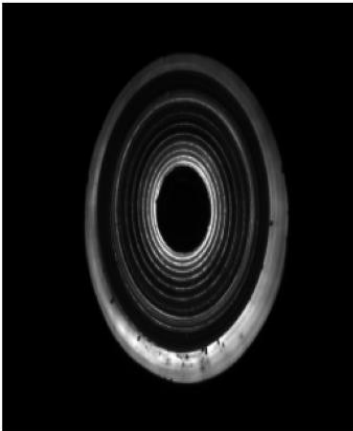
2.8 M	Trainable params			

Test metric	DataLoader 0
image_AUROC	1.0
image_F1Score	0.9924812316894531

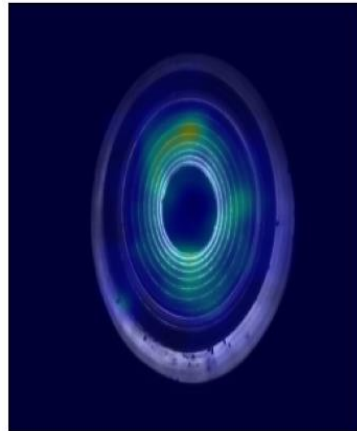
Test Results: [{'image_AUROC': 1.0, 'image_F1Score': 0.9924812316894531}]

KO CLASS

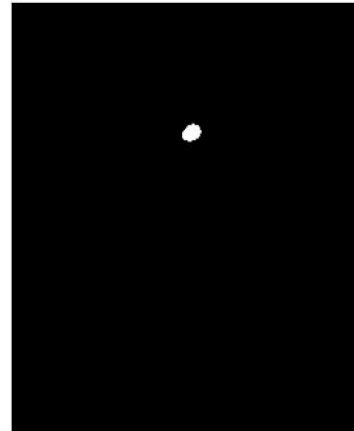
Image



Predicted Heat Map



Predicted Mask

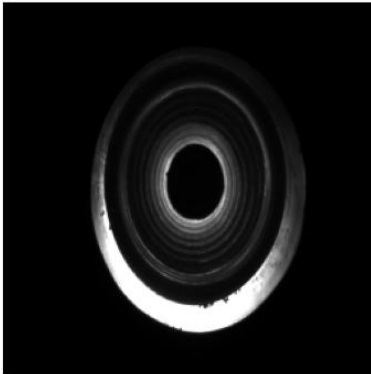


Segmentation Result

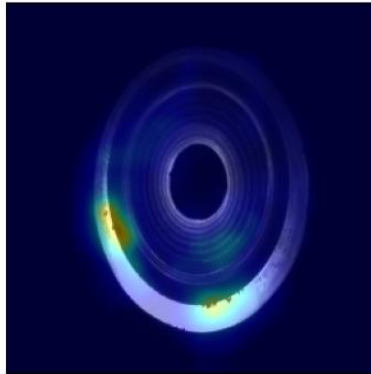


RZKO CLASS

Image



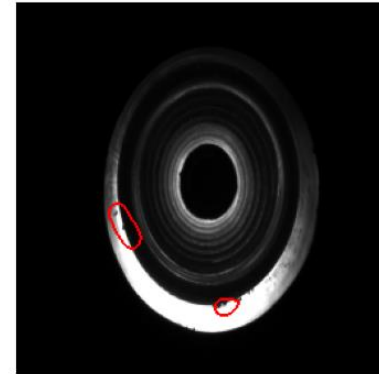
Predicted Heat Map



Predicted Mask

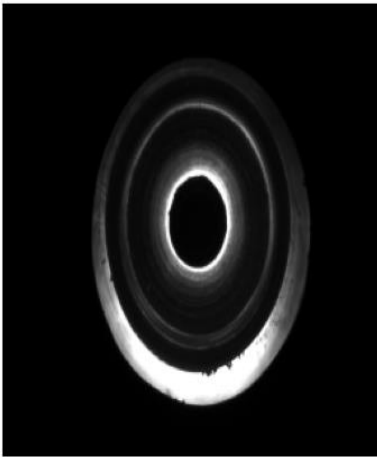


Segmentation Result

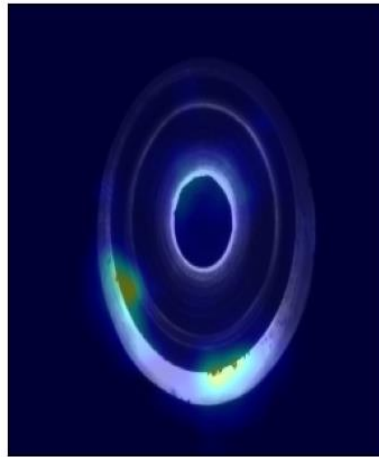


RZOK CLASS

Image



Predicted Heat Map



Predicted Mask



Segmentation Result

