PROMPT DEFECT

A Prompt-Based Anomaly Detection System

VAND 3.0 Challenge MVTEC AD 2 Dataset
Unsupervised Anomaly Detection and Localization
in Industrial Products

ABOUT US

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OBJECTIVE

Develop an unsupervised anomaly detection model using MVTEC AD 2.Identify and localize defects in industrial products. Model trained solely on normal images, evaluated on a mix of normal and anomalous images.

CHALLENGES

- Real-World Variability: Handling diverse lighting, transparency, and overlapping objects.
- Extremely Small Defects: Detecting subtle anomalies occupying small regions.
- Unsupervised Learning: Learning from normal images without any prior defect information.

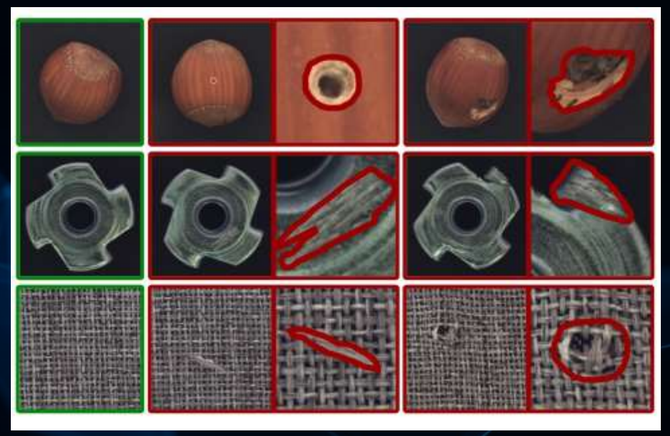
- Pixel-Level Localization: Accurate segmentation of defective regions.
- Robustness Assessment: Ensuring performance across varied test scenarios.

EVALUATION METRICS

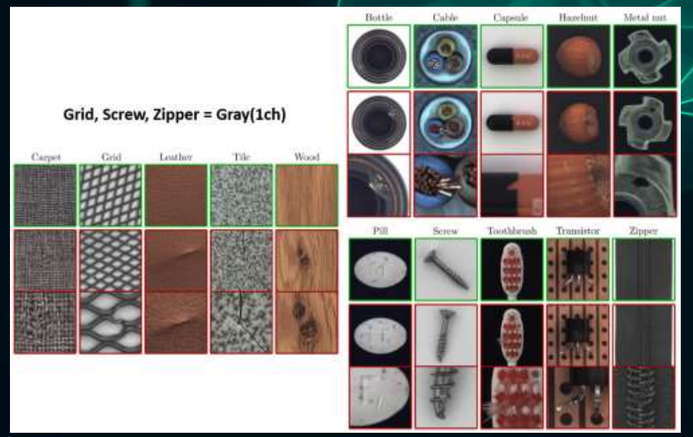
Segmentation F1 Score (SegF1): Balance between precision and recall in pixel-level anomaly detection.

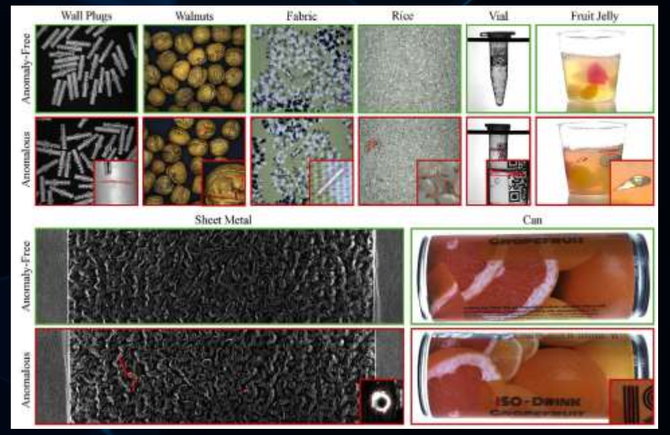
Image AUC : For global image anomaly detection.

DATASET OVERVIEW

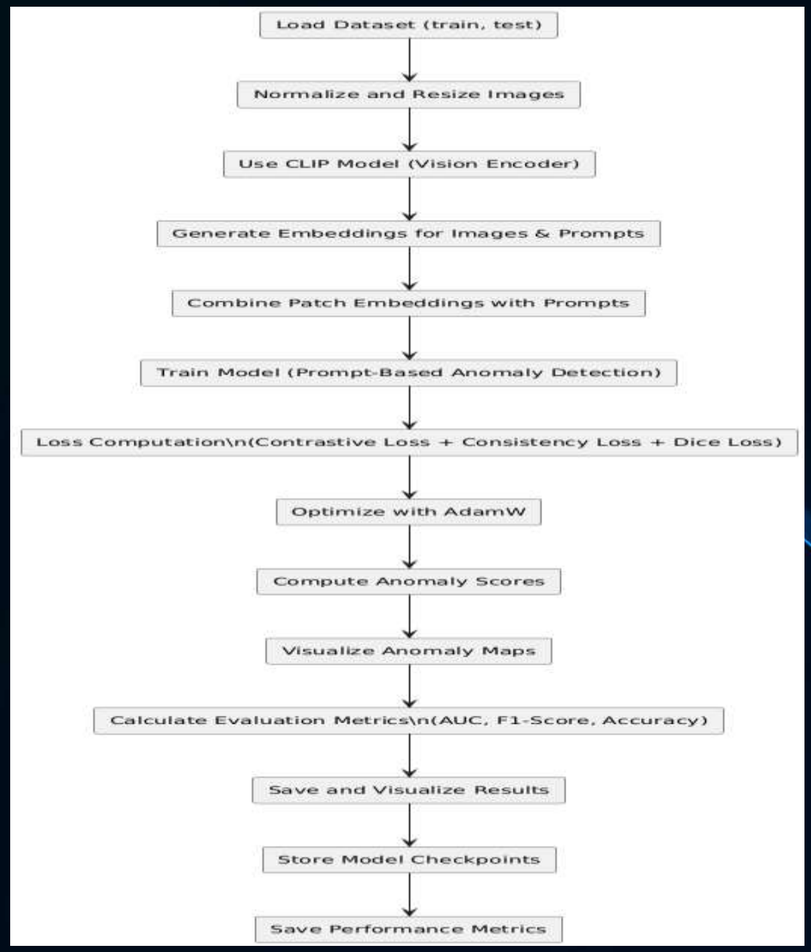


Category	Bottle	Cable	Capsule	Carpet	Grid	Hazelnut	Leather	Metal nut
Normal Sample								
Anomaly Sample								
Category	Pill	Screw	Tile	Toothbrush	Transistor	Wood	Zipper	
Normal Sample								
Anomaly Sample								





OUR APPROACH



INNOVATION

RESULTS

FINDINGS

Arowwai Industries

THANK YOU!

FOR YOUR ATTENTION

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