Flexible photovoltaic panel detection

In this repository you will find trained detection models that point out where the panel faults are by using radiometric thermal infrared pictures. In Web-API contains a performant, production-ready reference ...

A custom dataset was constructed by combining a public PV panel defect database with field-collected images, further expanded through data augmentation and self-training strategy.

Regular maintenance and inspection are vital to extend the lifespan of these systems, minimize energy losses, and protect the environment. This paper presents an innovative explainable ...

Within this research, we introduce a streamlined yet effective model founded on the "You Only Look Once" algorithm to detect photovoltaic panel defects in intricate settings.

This paper aims to evaluate the effectiveness of two object detection models, specifically aiming to identify the superior model for detecting photovoltaic (PV) modules based on aerial images.

In this paper, PV-YOLO is proposed to replace YOLOX"s backbone network, CSPDarknet53, with a transformer-based PVTv2 network to obtain local connections between images and feature maps to ...

ForumSummaryTo do list:RequirementsQuickstartExample to use trained modelDevelopersModel DetectionType of DataModel-definition is a deep learning application for fault detection in photovoltaic plants. In this repository you will find trained detection models that point out where the panel faults are by using radiometric thermal infrared pictures. In Web-API contains a performant, production-ready reference implementation of this repository.See more on github IEEE XplorePV-YOLO: Lightweight YOLO for Photovoltaic Panel Fault DetectionIn this paper, PV-YOLO is proposed to replace YOLOX"s backbone network, CSPDarknet53, with a transformer-based PVTv2 network to obtain local connections between images and feature maps to ...

This paper presents an efficient end-to-end detector for photovoltaic panel defect detection, the LEM-Detector, drawing inspiration from the advancements of RT-DETR.

This paper presents a novel PV defect detection algorithm that leverages the YOLO architecture, integrating an attention mechanism and the Transformer module.

This study focuses on defect detection of photovoltaic panels under visible light, highlighting its key advantages: low equipment cost, easy integration, and flexible deployment (Ying ...

However, the rapid growth of PV power deployment also brings important challenges to the maintenance of

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PV panels, and in order to solve this problem, this paper proposes an innovative ...

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