
To achieve this, the IB3DM and XGBoost are used as a base model to build an XAI application using the Local interpretable model-agnostic explanations (LIME) framework. By fusing ...

In this paper, we propose PV Segmenter, a frequency-guided edge-aware network that employs frequency-domain learning to improve edge detection and pattern recognition in distributed ...

Because of the difficulty in finding datasets containing many images from the visual spectrum with common defects of PV panels, this work aimed to create a public dataset with ...

The Solar-Panel-Detector app analyzes satellite images to detect the presence of solar panels, serving both environmental research and the solar energy market. It provides insights into potential areas for ...

To solve this problem, we develop a Deep Edge-Based Fault Detection (DEBFD) method, which applies convolutional neural networks (CNNs) for edge detection and object detection ...

Deploying PV defect detection algorithms on edge computing platforms poses significant challenges in terms of both computational power and storage requirements.

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

Improving detection speed is the focus of the one-stage method, while the two-stage method emphasizes detection accuracy. In the practical detection of photovoltaic module defects, we should ...

Finally, the YOLOv8-BCB algorithm is compared with other algorithms based on detection performance metrics such as precision, recall, and recognition speed. The method ...

Based on the above analysis, we construct a general framework for automatic fault detection of solar panels.

As shown in Figure 1, the framework consists of three parts: edge detection, contour filter, ...

Web: https://www.sesona.co.za