

Nondestructive testing (NDT) is being used to detect surface or internal faults. 24-26 The application of NDT can reduce maintenance tasks in wind turbines, 27, 28 concentrated solar power 29, 30 or PV solar plants, 31, ...

photovoltaic system, solar energy, solar panels, infrared imaging, image processing, computer vision, machine learning, object detection, infrared thermography I. INTRODUCTION Utility ...

This paper based on U-Net network and HSV space, proposes a method of PV infrared image segmentation and location detection of hot spots, which is used to detect and analyze the shielding of PV panels. Firstly, the ...

Results and Discussion Proposed approach works in two phases wherein the first phase deals with locating the potential hotspots that need to be examined while the second ...

Defects in photovoltaic panels are generally detected by analyzing infrared images taken by drones. However, the photovoltaic panel defects to be detected in infrared images are small, ...

First, photovoltaic module images are collected by UAV equipped with infrared thermal imaging cameras. Next, the collected PV module defects are labeled. Finally, the improved Faster R ...

A method of PV infrared image segmentation and location detection of hot spots, which is used to detect and analyze the shielding of PV panels, is proposed based on U-Net network and HSV ...

the field of infrared PV panel detection, and aim at providing a more robust and accurate solution to the specific problem of hot spots caused by green plants and dust ...

A new PV panel condition monitoring and fault diagnosis technique that uses a U-Net neural network and a classifier in combination to intelligently analyse the PV panel's infrared thermal ...

The health condition evaluation of photovoltaic plants is considered a significant challenge for years. This paper proposed a framework for photovoltaic panels segmentation and defects ...

The proposed model has been validated on two big PV plants in the south of Italy with an outstanding [email protected] exceeding 98% for panel detection, a remarkable [email ...

Photovoltaic (PV) panels are prone to experiencing various overlays and faults that can affect their

performance and efficiency. The detection of photovoltaic panel overlays and faults is crucial for enhancing the ...

detection and analysis method for infrared photovoltaic panels based on image processing. Front. Energy Res. 10:978247. ... the field of infrared PV panel detection, and aim at providing

Web: <https://www.solar-system.co.za>

