Find foreign objects on photovoltaic panels

In some embodiments of the method for detecting and cleaning foreign matters on the photovoltaic panel, the sensing unit is used for shooting a near-infrared image of the photovoltaic panel, and the ...

To address these problems, this paper proposes an IDETR deep learning target detection model based on Deformable DETR combined with transfer learning and a convolutional ...

Our goal is to simultaneously boost detection accuracy for foreign objects and defects on solar panels while significantly reducing the model"s computational complexity, creating a solution that is both high ...

This research presented a comprehensive benchmark of five state-of-the-art deep learning-based object detection models for real-time solar panel defect detection, using both an existing imbalanced ...

A power output model of foreign objests on surface is analized and a number of experiments were conducted in indoor and outdoor. The result shows that characterictic measured is consistent with ...

This research paper identifies one of the most effective YOLO models for future work in the field of object detection on solar panel surfaces, particularly those installed in tropical regions.

To mitigate background interference in large-scale images, we propose a Dynamically Adaptive and High-Efficiency Small Object Detection Network in Infrared Thermographic Images, ...

This identification algorithm provides automated inspection and monitoring capabilities for photovoltaic panels under visible light conditions.

The task of PV panel defect detection is to identify the category and location of defects in EL images.

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