Photovoltaic panel visual recognition

To address these challenges, this paper proposes a highly adaptable PV panel segmentation network, Detailed PV Monitoring (DPVM), specifically designed to enhance PV panel recognition in...

To tackle the challenge of modeling PV panels with diverse structures, we propose a coupled U-Net and Vision Transformer model named TransPV for refining PV semantic segmentation.

Automated PV defect detection, primarily relying on the analysis of visual or thermal imagery, presents a complex computer vision task. The visual data captured from PV panels is rich ...

Automated defect detection in electroluminescence (EL) images of photovoltaic (PV) modules on production lines remains a significant challenge, crucial for replacing labor-intensive and ...

The quality and efficiency of photovoltaic power generation are closely related to the excellent performance of solar panels ing defective panels may reduce power generation efficiency and ...

Semantic Scholar extracted view of "Enhancing Visual Feature Constraints in Segmentation Models for Photovoltaic Panel Recognition" by Zhiyu Zhao et al.

Case validation shows that the proposed visual feature enhancement method, combined with deep learning semantic segmentation models and remote sensing imagery, enables rapid and ...

In this paper, the main objective is to compare two YOLO models for detecting PV panels in aerial images.

Ensuring the quality of photovoltaic cells is paramount for enhancing the efficiency of solar energy systems. Traditional defect detection methods struggle with feature extraction and suffer from ...

Recognition of photovoltaic cells in aerial images with Convolutional Neural Networks (CNNs). Object detection with YOLOv5 models and image segmentation with Unet++, FPN, DLV3+ and PSPNet.

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