Solar power generation paper framework

Our AI-based Forecasting Framework, specifically designed for solar irradiance forecasting, empowers users to estimate the electricity output of any solar facility, irrespective of the ...

This research proposes a novel AI-enhanced hybrid solar energy framework integrating spatio-temporal forecasting, adaptive control, and decentralized energy trading.

The SPXAI architectural framework is designed to optimize solar panel power production through advanced data collection, machine learning, and explainable AI technologies, ensuring a highly ...

This paper addresses the challenge of accurately forecasting solar power generation (SPG) across multiple sites using a single common model.

For this research, we performed a qualitative and quantitative approach with a non-probabilistic sample size, obtaining 142 articles published since 1996-2016 with a slitting cut.

This paper presents a comprehensive review conducted with reference to a pioneering, comprehensive, and data-driven framework proposed for solar Photovoltaic (PV) power generation ...

To this end, this review will systematically evaluate recent solar power forecasting methods, particularly those developed between 2021 and 2025, that are based on AI methods and ...

In this paper, we propose a work flow of machine learning in predicting solar energy with high accuracy and interpretability in terms of using XAI tools.

The paper proposes a location specific design framework for maximized electrical output from solar tree using minimized structural material. Actual solar insolation data is utilized to orient ...

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