

Title: Smart Solar Power Generation Paper

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This study provides a paradigm for an artificial intelligence-driven hybrid solar power system, including optimized solar tracking with advanced technology, advanced photovoltaic (PV) ...

Therefore, this research underscores the potential of AI-based prediction in fostering efficient solar energy management and enhancing Smart Grid reliability and efficiency.

In this paper, a comprehensive study using ML and XAI methods to forecast solar generation has been presented. The main goal here is to support electricity providers and their ...

This paper comprehensively analyzes AI-driven solar energy generation and smart grid integration, focusing on enhancing renewable energy efficiency. The study examines applying ...

The integration of IoT technologies in smart energy management systems (SEMS) for PV power generation has transformed how solar energy is monitored, optimized, and distributed.

power generation forecasting was essential for microgrid stability and security, as well as solar photovoltaic integration in a strategic approach.

This paper indicates that the projected demands for power sector generation materials across a broad spectrum of climate-energy scenarios necessitate a considerable augmentation in the ...

This research tackles this issue by deploying machine learning models, specifically recurrent neural network (RNN), long short-term memory (LSTM), and gate recurrent unit (GRU), to ...

In this regard, this paper suggests an Internet of Things (IoT)-based smart solar energy management system (SEMS) to enable users to remotely monitor solar or PV (photovoltaic) panel...

Solar power generation in smart cities encompasses a wide array of applications, ranging from rooftop solar



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panels on residential buildings to expansive solar farms integrated into urban ...

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