Intelligent Operation and Maintenance of Microgrid User Cabinets

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The results confirm that ViTs achieve state-of-the-art performance in detecting PMU anomalies and are a promising grid monitoring and predictive maintenance solution.

Abstract--This research proposal presents a comprehensive framework for developing AI-enhanced Internet of Things (IoT) systems to optimize predictive maintenance strategies and im-prove ...

The integration of artificial intelligence in microgrids significantly improves their efficiency, reliability, and sustainability by optimizing various operational aspects.

This paper proposes an intelligent operation and maintenance management platform of intelligent microgrid group based on Cloud Architecture, and designs distributed microgrid system, ...

Resilience, efficiency, sustainability, flexibility, security, and reliability are key drivers for microgrid developments. These factors motivate the need for integrated models and tools for microgrid ...

Traditional maintenance methods, based on periodic inspections and fault diagnosis, struggle to adapt to the dynamics and complexity of microgrid systems. The introduction of digital ...

This paper begins by exploring the fundamentals of microgrids, emphasizing their structure, components, and control aspects. After introducing essential AI techniques, it analyzes their role in ...

Can AI improve microgrid operations? This systematic review has thoroughly examined the integration of emerging technologies and AI techniques in optimizing microgrid operations, a field of growing ...

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