Wind power generation system based on Hadoop

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Through comprehensive simulation testing, our findings unequivocally demonstrate the efficacy of our approach in preserving a harmonious balance between wind ...

INTRODUCTION: A wind turbine data analysis method based on the combination of Hadoop and edge computing is proposed. OBJECTIVES: Solve the wind turbine health ...

This paper presents an innovative method for wind power forecasting: instead of splitting the dataset according to devices or ...

This innovative approach involves leveraging the double-layer BiGRU and TCN algorithm models to extract temporal and contextual features from historical photovoltaic and ...

A detailed MATLAB Simulink model was developed to replicate turbine behaviour under identical wind conditions, physically, providing robust validation for ML predictions.

Over seven years from 2016 to 2023, conducted an exhaustive analysis of 92 research papers, focusing on the integration of Artificial Intelligence (AI) technologies to ...

Through this research, case studies are highlighted by which ML methods are proposed that directly target the issue of optimizing the wind power process through wind ...

We utilized WRF forecast data alongside ERA5 reanalysis data to estimate wind power generation for a wind farm located at Valladolid, Spain. The study evaluated the ...

This paper presents an innovative method for wind power forecasting: instead of splitting the dataset according to devices or providing independent models for each device, a ...

In recent years, data-driven approaches and machine learning-based methods have helped to enhance the operation and maintenance (O& M) of wind farms. These techniques ...

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As countries focus more on renewable energy, especially wind power, predicting wind power output accurately is crucial for managing power grids and saving costs. This paper ...

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