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Research Article

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A simple Node-RED implementation for digital twins in the area of manufacturing

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Interest in digital twins continues to strengthen with technological advancements in Industrial IoT. A digital twin is a virtual representation that models a physical object and effectively provides a two-way interaction with the real system. Digital twin models can be set up to test or analyze industrial applications before deployment thereby improving the efficiency ...

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Detection of electricity theft in developing countries-A machine learning approach

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In developing countries, energy theft negatively affects the growth of utilities through loss of revenue and damage to the grid. The size and variety of the utility data set require extracting meaningful features to counter theft, which is difficult and computationally expensive. Recent developments have made machine learning more accessible to researchers, enabling i ...

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Short Communication

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Informatization process of wind and solar resource power generation: Empirical abstraction and packing algorithm

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The development of software tools is critical to meeting the changing needs of the wind and solar resource generation industries. By identifying some of the limitations of existing systems, such as fragmentation in data query and plant management, as well as a lack of data resource management. In response to these issues, it is proposed to use a hybrid deep network mo ...

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Literature Review

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Security and privacy in federated learning: A survey

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Federated Learning (FL) allows multiple nodes without actually sharing data with other confidential nodes to retrain a common model. This is particularly relevant in healthcare applications, where data such as medical records are private and confidential. Although federated learning avoids the exchange of actual data, it still remains possible to fight protection on p ...

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