Iran fault detection in smart grid

autonomous smart grid fault detection is critical for smart grid system state awareness, maintenance and operation. This paper focuses on fault monitoring in smart grid and discusses the inherent technical challenges and solutions. In particular, we first present the basic principles of smart grid fault detection. Then, we explain the new ...

The article presents a new method combining fuzzy logic and neural networks to detect, categorize, identify and locate faults based on the data of sensors and smart meters put in the smart grid. The technique provided in this research makes it feasible to discover and classify problems in the network by simultaneously using the OpenDSS-MATLAB ...

new possibilities in terms of fault detection and mitigation. By a system-wide deployment of PQA and PMU devices the grid may be monitored in real-time via an efficient communication network. This enables the continuous evaluation of the current state of the grid, indicating congestions, frequency oscillations and overall load distribution.

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Considering fault detection and classification a key factor to SG reliability, this work provides a systematic review of SG faults from the most significant research databases and state-of-the-art research papers aiming at creating a comprehensive classification framework on the relevant requirements.

Better monitoring solutions and predictive methods can increase the possible utilization of the existing grid and reduce the fault frequency. This paper presents some current challenges in the grid and a possible monitoring solution and fault prediction method.

to advances in Artificial Intelligence (AI) and the suitable performance of smart protection methods in AC microgrids, Recurrent Neural Networks (RNNs) are used in the proposed method to locate faults in DC microgrids. In this method, fault detection and location are done by measuring feeders current and main bus voltage.

This study proposes a unique method for detecting faults in the smart grid via the use of data monitoring and classification using a fuzzy machine learning model. Here, enhanced smart sensor metering performed in the cloud at the network"s edge has been used to track data from the smart grid.

In this paper, the KNN technique augmented with principal component analysis (PCA) and linear discriminant analysis (LDA) is used to detect and classify different faults in a smart grid. In the first stage of the proposed

classification approach, PCA method which uses simple matrix operations and statistics to calculate a projection of the ...

Achieving autonomous smart grid fault detection is critical for smart grid system state awareness, maintenance, and operation. This article focuses on fault monitoring in smart grid and discusses the inherent technical challenges and solutions.

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