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New approach to analysis machine learning base power quality in a test grid system
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Abstract
The integration of renewable energy sources with advanced power grid technologies has raised concerns over electricity quality. The use of machine learning techniques enables the assessment of power quality data analysis for the purposes of identifying and mitigating disturbances. This study presents a novel approach to power quality analysis in various power systems, using machine learning algorithms. The proposed methodology involves the processing and analysis of real-time power quality data obtained from various appliances. This data is extracted using a power data collection system equipped with sensors. Subsequently, machine learning techniques and algorithms are employed to identify and classify voltage and current harmonics, as well as transients. The system uses machine learning techniques to identify, classify, and predict power quality issues by using historical data. © 2024 Author(s).

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