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                         Electric power production
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                         Energy Grids and Networks
                         Electrical Power Engineering
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                         Energy Policy, Economics and Management

   Lingua di pubblicazione   Inglese

   Formato               Materiale a stampa

   Livello bibliografico Monografia

   Nota di bibliografia  Includes bibliographical references and index.

   Nota di contenuto     Chapter 1. Power System Challenges and Issues -- Chapter 2. Introduction and literature review of power system challenges and issues -- Chapter 3. Machine learning and power system planning: opportunities, and challenges -- Chapter 4. Introduction to Machine Learning Methods in Energy Engineering -- Chapter 5. Introduction and Literature Review of the Application of Machine Learning/Deep Learning to Control Problems of Power Systems  -- Chapter 6. Introduction and literature review of the application of machine learning/deep learning to load forecasting in power system -- Chapter 7. A Survey of Recent particle swarm optimization (PSO)-Based Clustering Approaches to Energy Efficiency in Wireless Sensor Networks -- Chapter 8. Clustering in Power Systems Using Innovative Machine Learning/Deep Learning Methods -- Chapter 9. Voltage stability assessment in power grids

using novel machine learning-based methods -- Chapter 10. Evaluation and Classification of cascading failure occurrence potential dueto line outage -- Chapter 11. LSTM-Assisted Heating Energy Demand Management in Residential Buildings -- Chapter 12. Wind Speed Forecasting Using Innovative Regression Applications of Machine Learning Techniques -- Chapter 13. Effective Load Pattern Classification by Processing the Smart Meter Data Based on Event-Driven Processing and Machine Learning -- Chapter 14. Prediction of Out-of-step Condition for Synchronous Generators Using Decision Tree Based on the Dynamic data by WAMS/PMU  -- Chapter 15. The adaptive neuro-fuzzy inference system model for short-term load, price and topology forecasting of distribution system -- Chapter 16. Application of Machine Learning for Predicting User Preferences in Optimal Scheduling of Smart Appliances -- Chapter 17. Machine Learning Approaches in a Real Power System and Power Markets.

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| Sommario/riassunto | This book evaluates the role of innovative machine learning and deep learning methods in dealing with power system issues, concentrating on recent developments and advances that improve planning, operation, and control of power systems. Cutting-edge case studies from around the world consider prediction, classification, clustering, and fault/event detection in power systems, providing effective and promising solutions for many novel challenges faced by power system operators. Written by leading experts, the book will be an ideal resource for researchers and engineers working in the electrical power engineering and power system planning communities, as well as students in advanced graduate-level courses. Offers innovative machine learning and deep learning methods for dealing with power system issues; Provides promising solution methodologies; Covers theoretical background and experimental analysis. |