Data Mining Technology and its Applications to Power Systems

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Abstract

With increasingly environmental constraints the modern Power and Energy Systems are experiencing huge transformations in many ways. The quantum of data in power systems is growing rapidly due to large database used by power systems engineers for various operations. From the power generation plants the electrical energy is transmitted and distributed to end users. Frequent failure of various equipments and the systems has made it impossible to maintain the continuity of supply. Sometimes these failures are beyond the control of the power system operator. The operation and planning of power systems provide a large amount of data and it is difficult to extract the useful information from this large database that is continuously used by operators. Data mining is a process of extracting interesting and previously unknown knowledge from a set of data. The data mining techniques help power systems planner/operator to have smooth system planning, operation and are useful for extracting useful information from the existing data banks. The paper describes the data mining technology and its applications that would be useful in power systems.
References


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**Index Terms**

Computer Science  
Power Systems
Keywords

Data Mining, Machine learning, Cluster analysis, Neural Networks