



Data mining Applications in Egyptian Official Statistics

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Abstract

Data mining is used for a variety of purposes in both the private and public sectors. The different algorithms and techniques like Classification, Clustering, Regression, Artificial Intelligence, Neural Networks, Association Rules, Decision Trees, Genetic Algorithm, Nearest Neighbor method etc., are used for knowledge discovery from databases. Electricity is more important in this world, the main objective of Electricity studies is to analyse carrying out generation, transmission and distribution in an effective manner and supply quality power to consumers. Availability of power is one of the biggest inputs necessary for the sustained growth of any economy. This becomes even more important for a country like Egypt, which is one of the most industrialized Countries in the Middle East. In this study focus on how the various data mining techniques are used in electricity forecasting for Egypt.

After measuring all those methods, they can detect a clear movement toward new, stochastic, and dynamic forecasting performances. It appears a lot of current research effort is absorbed on three such methods: Fuzzy Logic, Particularly Neural Networks and Expert Systems that prove that Egypt has been facing massive power deficits. According to the Central Agency for Public Mobilization and Statistics (CAPMAS) Electricity and Power surveys and Distribution Demand Function research, Egypt was expected to have a power deficit of around 18% in 2015-16^[6]. As a result, most of Egypt is now facing huge power cuts. On an average, 3-4 hours of power cuts are being experienced by consumers in the governorate.

Keywords: Clustering, data warehouses applications, Load curve analysis, and Electricity Forecasting and time series analysis.