Summary of Regression Dataset

Dataset name: Combined Cycle Power Plant Data Set

Dataset Information:

The dataset contains 9568 data points collected from a Combined Cycle Power Plant over 6 years (2006-2011), when the power plant was set to work with full load. Features consist of hourly average ambient variables Temperature (T), Ambient Pressure (AP), Relative Humidity (RH) and Exhaust Vacuum (V) to predict the net hourly electrical energy output (EP) of the plant. A combined cycle power plant (CCPP) is composed of gas turbines (GT), steam turbines (ST) and heat recovery steam generators. In a CCPP, the electricity is generated by gas and steam turbines, which are combined in one cycle, and is transferred from one turbine to another. While the Vacuum is colected from and has effect on the Steam Turbine, he other three of the ambient variables effect the GT performance.

Number of Attributes: 4

Number of Instances: 9568

Attribute Information:

(1) Ambient Temperature (AT): This input variable is measured in whole degrees in Celsius as it varies between 1.81 C and 37.11 C.

(2) Vacuum (Exhaust Steam Pressure, V): This variable is measured in cm Hg with the range of 25.36–81.56 cm Hg.

(3) Atmospheric Pressure (AP): This input variable is measured in units of minibars with the range of 992.89–1033.30 mbar.

(4) Relative Humidity (RH): This variable is measured as a percentage from 25.56% to 100.16%.

(5) Full Load Electrical Power Output (PE): PE is used as a target variable in the dataset. It is measured in mega watt with the range of 420.26–495.76 MW.

Reference:

https://archive.ics.uci.edu/ml/datasets/combined+cycle+power+plant

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