Household Electric Power Consumption

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Objective

To perform time series forecasting and also predict the electric power consumption of a household.

Methodology

The dataset we are using is from UCI Machine Learning Repository, where we get many datasets for performing machine learning tasks. For the following project, the dataset consists of the electric power consumption of an individual household over four years. Data contains variables like electrical quantities (voltage, kilowatt, ampere) and sub-metering values (appliance usage in various areas within the household). With this dataset, we will predict future power consumption using a Machine Learning method called Time Series Forecasting, where forecasts are made based on data comprising one or more time series. To perform prediction in Machine Learning, we require models where training, testing, and evaluation happen. We use ARIMA (Auto Regressive Integrated Moving Average) and LSTM (Long Short-Term Memory) models as these predict and give better results.

Dataset

https://archive.ics.uci.edu/dataset/235/individual+household+electric+power+consumption

References

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Gantt Chart