Household Power Consumption

Download: Excel Workbook, ReadMe

Abstract: is a set of files derived from the 1985 and later national American Housing Survey (AHS) and the 2002 and later Metro AHS. This system categorizes housing units by affordability and households by income, with respect to the Adjusted Median Income, Fair Market Rent (FMR), and poverty income. It also includes housing cost burden for owner and renter households. These files have been the basis for the worst case needs tables since 2001. [1]

Data Set Characteristics:	Multivariate	**Number of Instances:**	7200	**Area:**	Physical
Attribute Characteristics:	Real	**Number of Attributes:**	8	**Missing Values?**	N/A

Source:

https://archive.ics.uci.edu/ml/datasets/individual+household+electric+power+consumption

Data Set Information:

UC Urvine Machine Learning Repository Machine Learning dataset. The data set includes “Individual household electric power consumption data set”. A more thorough explanation can be found here: https://archive.ics.uci.edu/ml/datasets/individual+household+electric+power+consumption

Data variables include:

Name	Data Type	Explanation
DateTime	Date	Time stamp for the observation

[1] https://www.huduser.gov/portal/datasets/hads/hads.html

Global_active_power	Numeric	Household global minute-averaged active power
Global_reactive_power	Numeric	Household global minute-averaged reactive power
Voltage	Numeric	Minute-averaged voltage
Global_intensity	Numeric	Household global minute-average current intensity
Sub_metering_1	Numeric	Energy sub-metering No.1; corresponds to the kitchen, containing mainly a dishwasher, an over, a microwave (hot plates are not electric but gas powered)
Sub_metering_2	Numeric	Energy sub-metering No.2; corresponds to the laundry room, containing a washing-machine, a tumble-drier, a refrigerator and a

		light
Sub_metering_3	Numeric	Energy sub-metering No.2; corresponds to an electric water-heater and an air-conditioner

Data Summaries Calculated:

- Mean
- Standard Error
- Median
- Standard Deviation
- Kurtosis
- Skewness
- Range
- Minimum
- Maximum
- Count

Units for Data Summaries and Variables:

Name	**Unit Measurement**
Global_active_power	Kilowatts
Global_reactive_power	Kilowatts
Voltage	Volts
Global_intensity	Ampere

Sub_metering_1	Watt-hour of active energy
Sub_metering_2	Watt-hour of active energy
Sub_metering_3	Watt-hour of active energy

Data Transformations:

- Data was downloaded from https://d396qusza40orc.cloudfront.net/exdata%2Fdata%2Fhousehold_power_consumption.zip
- Data was imported for dates 02-01-2007 to 02-05-2007.
- Date and Time variables were combined together and converted into Date/Time class for ease of plotting.
- A simple histogram was plotted using Base plotting package.
- The data is right skewed with a higher frequency of Global Active Power consumption in the 0 to 0.5 kilowatts range for this household over the February 1st to February 5 time period.