ctapply - An R package to measure central tendency and spread

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ctapply: **Object Summaries**

Description:

ctapply is a package used to produce summaries of basic statistics, such as central tendency(mean, median..) and standard deviation (spread). The package calls specific methods to produce the result. The user have option to print the result.

The sample data used for this package is: **Cost Function of Electricity Producers (1955)**

Below are the fields for the sample data used for the package

```
##   X  cost output labor laborshare capital capitalshare fuel fuelshare
## 1 1 0.082      2  2.09     0.3164     183       0.4521 17.9    0.2315
## 2 2 0.661      3  2.05     0.2073     174       0.6676 35.1    0.1251
## 3 3 0.990      4  2.05     0.2349     171       0.5799 35.1    0.1852
## 4 4 0.315      4  1.83     0.1152     166       0.7857 32.2    0.0990
## 5 5 0.197      5  2.12     0.2300     233       0.3841 28.6    0.3859
## 6 6 0.098      9  2.12     0.1881     195       0.2926 28.6    0.5193
```

Usage:

- You can use the package in two ways:
  - Either with the data that comes with the package **electricdata** as shown below

```
ctapply(electricdata$fuel)
```

```
##  The Mean=  26.32667
##  Standard Deviation(spread) =  7.704238
##
## The Center is:  26.32667
```

  - Or use your own data such as creating a numeric vector shown below:

```
data1 <- c(4,5,6,5,6,5,6,4,6,5,6,4,5,4,5,6)
ctapply(data1)
```

```
##  The Mean=  5.125
##  Standard Deviation(spread) =  0.8062258
##
## The Center is:  5.125
```

Arguments

object : An object for which a summary is desired. This could be a numeric vector or a data frame dataset.

np : A boolean value **(TRUE/FALSE)**. The statistics to use **(Mean, Median,. . .)**.

print : A boolean value **(TRUE/FALSE)**. This provide an option for users to print result.

The full syntax usage:

```
data1 <- c(4,5,6,5,6,5,6,4,6,5,6,4,5,4,5,6)
ctapply(data1, np=TRUE, print=TRUE)
```

```
##  The Mean=  5.125
##  Standard Deviation(spread) =  0.8062258
##
## The Center is:  5.125
```

Who should use this package

Why use **ctapply**? Use **ctapply** to quickly summarize data and identify what looks normal and what looks odd. The distribution of a variable shows what values the variable takes and how often the variable takes these values.