

# Package ‘HanStat’

February 13, 2023

**Type** Package

**Title** Package for Easy Interpretation of Statistical Methods

**Version** 0.90.0

**Date** 2023-02-10

**Maintainer** Konrad Krahl <Beratung@Hanseatic-Statistics.de>

**URL** <https://github.com/KonradKrahl/HanStat>

**BugReports** <https://github.com/KonradKrahl/HanStat>

**Description** A simple and time saving multiple linear regression function (OLS) with interpretation, optional bootstrapping, effect size calculation and all tested requirements.

**Depends** R (>= 4.1.0)

**Imports** boot, car, crayon, ggplot2, lmtest, olsrr, ggpubr, devtools

**License** GPL (>= 3)

**Encoding** UTF-8

**LazyData** true

**RoxygenNote** 7.2.3

**Language** en-US

**Suggests** testthat (>= 3.0.0)

**Config/testthat/edition** 3

**NeedsCompilation** no

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**Repository** CRAN

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data	<i>Randomized data for testing models Contains 5 Variables, one dependent, 4 independent. The fourth independent is correlated with the dependent</i>
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**Description**

Randomized data for testing models Contains 5 Variables, one dependent, 4 independent. The fourth independent is correlated with the dependent

**Usage**

```
data(data)
```

**Format**

```
data.frame
```

**Source**

```
https://www.hanseatic-statistics.de
```

**References**

K.T.Krahl (2023)

**Examples**

```
data(data)  
LinReg('dv',c('iv_1','iv_2','iv_3'),data=data,BS=FALSE,NBS=1000,OC=FALSE,plot=TRUE)
```

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HansStat Data	<i>Radomized data for testing models</i>
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Contains 5 Variables, one dependent, 4 independent. The fourth independent is correlated with the dependent

**Usage**

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**Source**

<https://www.hanseatic-statistics.de/>

**References**

K.T.Krahl (2023)

**Examples**

```
data(data)
```

```
LinReg('dv',c('iv_1','iv_2','iv_3','iv_4'),data=data, BS = TRUE, NBS=1000, OC = TRUE, plot=TRUE)
```

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LinReg

*LinReg*

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**Description**

A simple multiple linear regression function (OLS) and its requirements. The function automatically interprets the results, creates plots and provides an indication of violations of assumptions. It also calculates the effect sizes of the models. The bootstrapping method can also be used.

**Usage**

```
LinReg(dv, iv, data, BS, NBS, OC, plot)
```

**Arguments**

dv	dependent variable name as a string
iv	a string vector with the names of the independent variables, separated by commas, use c(iv_1,iv_2...iv_n)
data	a data frame containing the variables
BS	Bootstrapping method, set BS to TRUE or FALSE, if FALSE Number of bootstraps are ignored
NBS	number of random samples used for bootstrapping
OC	Outlier control, set OS to TRUE or FALSE, to use cooks distance to exclude outliers, if BS==TRUE, OS must be FALSE
plot	set plot to TRUE to create simple scatterplots of correlation between variables

**Value**

the results of linear regression, plots and all requirements plus an interpretation & conclusion about the violations

**Source**

<https://www.hanseatic-statistics.de>

**Examples**

```
m<-LinReg('dv',c('iv_1','iv_2','iv_3'),data=data,BS=FALSE,NBS=1000,OC=FALSE,plot=TRUE)
print(m$Results)
print(m$Require)
print(m$Plots)
```

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