

Package ‘psymetlab’

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Title Provides useful functions for APA formatting and writing output to Excel

Version 1.0.0

Description

Package includes a variety of functions to tag significant correlations, write data to excel, etc.

Depends R (>= 3.1.3)

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LazyData true

RoxygenNote 5.0.1

Imports psych, xlsx

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f.corstar	<i>Add asterisk(s) to significant correlations</i>
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Description

Uses an output object from the Psych package and adds 1 or 2 askterisks (stars) to the correlation for APA table output. Returns object as dataframe.

Usage

```
f.corstar(corr.obj, is.triangle = TRUE, p.val.1 = 0.05, p.val.2 = 0.01)
```

Arguments

<code>corr.obj</code>	is the output list object from the <code>corr.test</code> function in the Psych package
<code>is.triangle</code>	is whether the correlation is a symmetric matrix (default) or a rectangular matrix in which one set of variables is correlated with a different set.
<code>p.val.1</code>	is the p-value desired to trigger a single astrisk (default = .05)
<code>p.val.2</code>	is the p-value desired to trigger a second astrisk added to the first default = .01. <code>p.val.2</code> should be a smaller p val than <code>p.val.1</code> . set <code>p.val.2 = FALSE</code> if no second astrisk is desired

Author(s)

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Examples

```
R = matrix(cbind(1,.80,.2,.80,1,.7,.2,.7,1),nrow=3)
U = t(chol(R))
set.seed(1)
random.normal = matrix(rnorm(dim(U)[1]*100,0,1), nrow=dim(U)[1], ncol=100);
X = as.data.frame(t(U %*% random.normal))
require('psych')
corrs.1 = corr.test(X)
f.corstar(corrs.1)
f.corstar(corrs.1, p.val.1 = .01, p.val.2 = FALSE)
corrs.2 = corr.test(X[1:2],X[3])
f.corstar(corrs.2,is.triangle = FALSE)
```

`f.get.reg.output`

Take output from lm function and put relevant info into a dataframe

Description

Returns a dataframe with predictors and coefficients listed along with model statistics F,df,p, and r-squared values.

Usage

```
f.get.reg.output(out.lm)
```

Arguments

<code>out.lm</code>	results of a linear regression from <code>lm()</code>
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Author(s)

Adam Meade <awmeade@ncsu.edu>

Examples

```
R = matrix(cbind(1,.80,.2,.80,1,.7,.2,.7,1),nrow=3)
U = t(chol(R))
set.seed(1)
random.normal <- matrix(rnorm(dim(U)[1]*100,0,1), nrow=dim(U)[1], ncol=100);
X <- as.data.frame(t(U %*% random.normal))
model.out <- lm(X[,1]~X[,2]+X[,3])
f.get.reg.output(model.out)
```

f.screen.outliers	<i>Deletes multivariate outliers using Mahalanobis distance</i>
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Description

Accepts a dataframe and optional list of variables within that dataframe for which to screen the data. The function computes mahalanobis distace and associated chi-square on the screening data and then returns a dataframe that is a subset of the original all.data dataframe based on non-significant chi-square values.

Usage

```
f.screen.outliers(all.data, screening.vars = NULL, p.val = 0.05)
```

Arguments

`screening.vars` is an optional array of variable names on which the screening should be based.

`p.val` is the cutoff value of the chi-square distribution to use. default is .05.

`add.data` is the database from which to remove outliers

Author(s)

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Examples

```
nrow(trees)
new.data <- f.screen.outliers(trees)
nrow(new.data)
```

f.write.corrs	<i>Formats in APA format and writes correlation matrices to an excel sheet</i>
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Description

Uses an output object from the Psych package and adds 1 or 2 asterisks (stars) to the correlation for APA table output. Returns object as dataframe. Writes correlational data for r, n, and pvalues to three consecutively named Excel sheets.

Usage

```
f.write.corrs(f.name = "output.xlsx", s.name, obj.corrs, print.p = TRUE,
              print.n = TRUE, ...)
```

Arguments

f.name	is the file name to which to write the data. default = 'output.xlsx'
s.name	is the name of the Excel sheet(s) to which to write the data
obj.corrs	is the correlation object from the corr.test function in the Psych package
print.p	requests printing of p values. default = TRUE
print.n	requests printing of sample size (n). default = TRUE
...	parameters passed to the f.corstar function

Author(s)

Adam Meade <awmeade@ncsu.edu>

Examples

```
library('psych')
R = matrix(cbind(1,.80,.2,.80,1,.7,.2,.7,1),nrow=3)
U = t(chol(R))
set.seed(1)
random.normal = matrix(rnorm(dim(U)[1]*100,0,1), nrow=dim(U)[1], ncol=100);
X = as.data.frame(t(U %*% random.normal))
corrs = corr.test(X)
f.write.corrs(s.name='example',obj.corrs=corrs)
f.write.corrs(f.name='example.xlsx',s.name='example',obj.corrs=corrs,p.val.2=FALSE)
```

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