

Package ‘errint’

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Type Package

Title Builds Error Intervals

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Author Jesus Prada [aut,cre]

Maintainer Jesus Prada <jesus.prada@estudiante.uam.es>

Description Builds and analyzes error intervals for a particular model predictions assuming different distributions for noise in the data.

Depends VGAM, rootSolve

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R topics documented:

acc_intervals	2
best_distribution	3
df_intervals	4
df_intervals.default	6
error_interval	7
error_interval.default	8
int_lap	9
measure	12
measure.default	13
print.df_intervals	14

print.error_interval	15
print.measure	16
print.summary.error_interval	17
print.summary.measure	18
p_laplace	19
sort_distributions	21
summary.error_interval	22
summary.measure	23

Index	25
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acc_intervals	<i>Accuracy of Error intervals</i>
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Description

int_intervals computes the real accuracy of a given error intervals for a particular set of errors and a particular error function.

Usage

```
acc_intervals(interv, errors, f = function(x, y) { abs(x - y) },
             tol = 10^-8)
```

Arguments

interv	error interval.
errors	set of errors.
f	error function to be used to compute error between real x (interv) and predicted y (errors) values. See also 'Details'.
tol	used to normalize residual values to (0,1) when beta is the assumed distribution. See also 'Details'.

Details

f must be a function that takes two arguments, x and y, and return a numeric value.

The formula used to normalize residual values to (0,1) when a Beta distribution is assumed is $\frac{|\phi|}{\max|\phi|+tol}$.

Value

Returns an object of class c("measure", "list") with information of the interval accuracy.

Author(s)

Jesus Prada, <jesus.prada@estudiante.uam.es>

References

Link to the scientific paper

Prada, Jesus, and Jose Ramon Dorronsor. "SVRs and Uncertainty Estimates in Wind Energy Prediction." *Advances in Computational Intelligence*. Springer International Publishing, 2015. 564-577,

with theoretical background for this package is provided below.

http://link.springer.com/chapter/10.1007/978-3-319-19222-2_47

See Also

[measure error_interval](#)

Examples

```
interv<-int_gau(rnorm(10),0.1)
acc_intervals(interv,rnorm(10))
acc_intervals(interv,rnorm(10),function(x,y){x-y})
```

best_distribution	<i>Distribution with Best Error Intervals</i>
-------------------	---

Description

best_distribution computes the distribution assumption that gives error intervals with the lower accuracy error for a given set of residuals.

Usage

```
best_distribution(phi, errors, dists = c("n", "nm", "l", "lm", "w", "b",
    "moge"), ...)
```

Arguments

phi	residual values used to compute the error interval.
errors	set of real errors corresponding to the predictions of a particular model.
dists	character vector with the distribution assumptions to test. See also 'Details'.
...	additional arguments to be passed to functions error_interval and acc_intervals.

Details

Allowed distribution assumptions are:

- "n": Zero-mu Gaussian
- "nm": General Gaussian
- "l": Zero-mu Laplace

- "lm": General Laplace
- "b": Beta
- "w": Weibull
- "moge": Moge

Value

Returns an object of class `c("df_intervals", "data.frame")` with information of the distribution assumption with lower accuracy error.

Author(s)

Jesus Prada, <jesus.prada@estudiante.uam.es>

References

Link to the scientific paper

Prada, Jesus, and Jose Ramon Dorronsoro. "SVRs and Uncertainty Estimates in Wind Energy Prediction." *Advances in Computational Intelligence*. Springer International Publishing, 2015. 564-577,

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See Also

[df_intervals](#) [error_interval](#) [acc_intervals](#)

Examples

```
best_distribution(rnorm(10), rnorm(10), dists=c("n", "b"))
```

df_intervals

Data Frames of Intervals

Description

`df_intervals` creates an object of class `c("df_intervals", "data.frame")`.

`as.df_intervals` attempts to coerce its argument `x` into an object of class `c("df_intervals", class(x))`. If this is not possible `x` is returned unchanged.

`is.df_intervals` returns TRUE if `x` is an R object with "df_intervals" as one of its classes. It returns FALSE otherwise.

Usage

```
df_intervals(distributions, errs)
```

```
as.df_intervals(x)
```

```
is.df_intervals(x)
```

Arguments

`distributions` vector containing the names of the distribution corresponding to each error.

`errs` vector of errors associated to intervals built under a particular distribution assumption indicated by 'distributions'.

`x` an R object.

Value

`df_intervals` returns an object of class `c("df_intervals", "data.frame")` with information regarding the error of intervals built under different distribution assumptions.

`as.df_intervals` returns an object of class `c("df_intervals", class(x))` with information contained in `x` if possible. Returns `x` otherwise.

`is.df_intervals` returns `TRUE` if `x` is an R object with "df_intervals" as one of its classes. `FALSE` otherwise.

Author(s)

Jesus Prada, <jesus.prada@estudiante.uam.es>

References

Link to the scientific paper

Prada, Jesus, and Jose Ramon Dorronsoro. "SVRs and Uncertainty Estimates in Wind Energy Prediction." *Advances in Computational Intelligence*. Springer International Publishing, 2015. 564-577,

with theoretical background for this package is provided below.

http://link.springer.com/chapter/10.1007/978-3-319-19222-2_47

Examples

```
df_intervals("l",0.1)
```

```
df_intervals(c("l","lm","n","nm","b","w"),rep(0.1,6))
```

```
df<-data.frame(distribution=rnorm(10),error=rnorm(10))
```

```
as.df_intervals(df)
```

```
v<-c("a","b")
```

```
as.df_intervals(v)
```

```
df<-data.frame(distribution=rnorm(10),error=rnorm(10))
is.df_intervals(df)
res<-as.df_intervals(df)
is.df_intervals(res)
```

df_intervals.default *Data Frames of Intervals*

Description

df_intervals creates an object of class c("df_intervals", "data.frame").

Usage

```
## Default S3 method:
df_intervals(distributions, errs)
```

Arguments

distributions vector containing the names of the distribution corresponding to each error.
errs vector of errors associated to intervals built under a particular distribution assumption indicated by 'distributions'.

Value

Returns an object of class c("df_intervals", "data.frame") with information regarding the error of intervals built under different distribution assumptions.

Author(s)

Jesus Prada, <jesus.prada@estudiante.uam.es>

References

Link to the scientific paper

Prada, Jesus, and Jose Ramon Dorronsoro. "SVRs and Uncertainty Estimates in Wind Energy Prediction." *Advances in Computational Intelligence*. Springer International Publishing, 2015. 564-577,

with theoretical background for this package is provided below.

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Examples

```
df_intervals("l",0.1)

df_intervals(c("l","lm","n","nm","b","w"),rep(0.1,6))
```

error_interval	<i>Error Intervals</i>
----------------	------------------------

Description

error_interval creates an object of class c("error_interval", "list").

as.error_interval attempts to coerce its argument x into an object of class c("error_interval", class(x)). If this is not possible x is returned unchanged.

is.error_interval returns TRUE if x is an R object with "error_interval" as one of its classes. It returns FALSE otherwise.

Usage

```
error_interval(phi, s = 0.05, dist = "n", tol = 10^-6, ...)
```

```
as.error_interval(x)
```

```
is.error_interval(x)
```

Arguments

phi	a vector with residual values used to compute the error interval.
s	confidence level, e.g. s=0.05 for the standard 95 percent confidence interval.
dist	assumed distribution for the noise in the data.
tol	used to normalize residual values to (0,1) when beta is the assumed distribution. The formula used is $\text{abs}(\text{phi})/(\text{max}(\text{abs}(\text{phi}))+\text{tol})$.
...	additional arguments to be passed to the low level error_interval building functions (see below).
x	an R object.

Value

error_interval returns an object of class c("error_interval", "list") with information regarding the error intervals built.

as.error_interval returns an object of class c("error_interval", class(x)) with information contained in x if possible. Returns x otherwise.

is.error_interval returns TRUE if x is an R object with "error_interval" as one of its classes. FALSE otherwise.

Author(s)

Jesus Prada, <jesus.prada@estudiante.uam.es>

References

Link to the scientific paper

Prada, Jesus, and Jose Ramon Dorronsor. "SVRs and Uncertainty Estimates in Wind Energy Prediction." *Advances in Computational Intelligence*. Springer International Publishing, 2015. 564-577,

with theoretical background for this package is provided below.

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Examples

```
error_interval(rnorm(10))
```

```
error_interval(rnorm(10),s=0.1,dist="lm")
```

```
l<-list(min=-1,max=1,err=0.05,s=0.1,dist="n",phi=rnorm(10))
as.error_interval(l)
```

```
v<-c("a","b")
as.error_interval(v)
```

```
l<-list(min=-1,max=1,err=0.05,s=0.1,dist="n",phi=rnorm(10))
is.error_interval(l)
res<-as.error_interval(l)
is.error_interval(res)
```

error_interval.default

Error Intervals

Description

error_interval.default creates an object of class c("error_interval", "list").

Usage

```
## Default S3 method:
error_interval(phi, s = 0.05, dist = "n", tol = 10^-6,
  ...)
```

Arguments

phi	a vector with residual values used to compute the error interval.
s	confidence level, e.g. s=0.05 for the standard 95 percent confidence interval.
dist	assumed distribution for the noise in the data.

tol used to normalize residual values to (0,1) when beta is the assumed distribution. The formula used is $\text{abs}(\phi)/(\text{max}(\text{abs}(\phi))+\text{tol})$.

... additional arguments to be passed to the low level error_interval building functions (see below).

Value

Returns an object of class `c("error_interval", "list")` with information regarding the error intervals built.

Author(s)

Jesus Prada, <jesus.prada@estudiante.uam.es>

References

Link to the scientific paper

Prada, Jesus, and Jose Ramon Dorransoro. "SVRs and Uncertainty Estimates in Wind Energy Prediction." *Advances in Computational Intelligence*. Springer International Publishing, 2015. 564-577,

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http://link.springer.com/chapter/10.1007/978-3-319-19222-2_47

Examples

```
error_interval(rnorm(10))
```

```
error_interval(rnorm(10),s=0.1,dist="lm")
```

int_lap

Building Error Intervals

Description

int_lap computes the error interval of a set of residuals assuming a Laplace distribution with zero location for the noise.

int_gau computes the error interval of a set of residuals assuming a Gaussian distribution with zero mean for the noise.

int_lap_mu computes the error interval of a set of residuals assuming a Laplace distribution.

int_gau_mu computes the error interval of a set of residuals assuming a Gaussian distribution.

int_beta computes the error interval of a set of residuals assuming a Beta distribution.

int_weibull computes the error interval of a set of residuals assuming a Weibull distribution.

See also 'Details'.

int_moge computes the error interval of a set of residuals assuming a MOGE distribution.

Usage

```

int_lap(phi, s)

int_gau(phi, s, ps = 0, threshold = 10^-2, upper = 10^6)

int_lap_mu(phi, s, ps = stats::median(phi, na.rm = T), threshold = 10^-2,
  upper = 10^6)

int_gau_mu(phi, s, ps = mean(phi, na.rm = T), threshold = 10^-2,
  upper = 10^6)

int_beta(phi, s, original_phi = phi, ps = 10^-4, threshold = 10^-4,
  upper = 1, m1 = mean(phi, na.rm = T), m2 = mean(phi^2, na.rm = T),
  alpha_0 = (m1 * (m1 - m2))/(m2 - m1^2), beta_0 = (alpha_0 * (1 - m1)/m1))

int_weibull(phi, s, ps = 10^-4, threshold = 10^-2, upper = 10^6,
  k_0 = 1)

int_moge(phi, s, ps = 10^-4, threshold = 10^-4, upper = 10^6,
  lambda_0 = 1, alpha_0 = 1, theta_0 = 1)

```

Arguments

phi	residual values used to compute the error interval.
s	confidence level, e.g. s=0.05 for the standard 95 percent confidence interval.
ps	minimum value to search for solution of the integral equation to solve. See also 'Details'.
threshold	step size to increase ps after each iteration. See also 'Details'.
upper	maximum value to search for solution of the integral equation to solve. See also 'Details'.
original_phi	original $\{\phi_i\}$ values. Only used for beta distribution.
m1	first moment of the residuals. Used to compute alpha_0.
m2	second moment of the residuals. Used to compute beta_0.
alpha_0	initial value for Newton-Raphson method for the parameter α . See also 'Details' and multiroot .
beta_0	initial value for Newton-Raphson method for the parameter β . See also 'Details' and multiroot .
k_0	initial value for Newton-Raphson method for the parameter κ . See also 'Details' and multiroot .
lambda_0	initial value for Newton-Raphson method for the parameter λ .
theta_0	initial value for Newton-Raphson method for the parameter θ .

Details

For the Zero- μ Laplace distribution the value of the corresponding integral equation has a closed solution of the form $ps = -\sigma \log 2s$.

For the other distributions, starting with the initial value of `ps` passed as argument, the value, `integral`, of the corresponding integral expression is computed (see also 'References' for an in-depth explanation of this integral expression). If `integral` is smaller than `1-s` then `ps` is increased by a step size of `threshold` value and `integral` is recomputed. If `integral` is greater or equal than 0 or if `ps` gets bigger than `upper`, the loop stops and the last value of `ps` will be its final value.

In addition, for the Beta distribution values of parameters α and β are estimated using Newton-Raphson method.

For the Weibull distribution value of parameter κ is estimated using Newton-Raphson method and then estimated value of λ is computed using a closed form that depends on κ .

For the MOGE distribution values of parameters λ , α and θ are estimated using Newton-Raphson method.

See also 'References'.

Value

Returns an object of class `c("error_interval", "list")` with information of the corresponding error interval.

Author(s)

Jesus Prada, <jesus.prada@estudiante.uam.es>

References

Link to the scientific paper

Prada, Jesus, and Jose Ramon Dorronsoro. "SVRs and Uncertainty Estimates in Wind Energy Prediction." *Advances in Computational Intelligence*. Springer International Publishing, 2015. 564-577,

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See Also

[error_interval](#)

[p_laplace](#)

[p_gaussian](#)

[p_beta](#)

[p_weibull](#)

[multiroot](#)

[p_moge](#)

Examples

```
int_lap(rnorm(10),0.1)
```

```
int_gau(rnorm(10),0.1,0.1,10^-3,10^2)
```

```
int_lap_mu(rnorm(10),0.1,0.1,10^-3,10^2)
```

```
int_gau_mu(rnorm(10),0.1,0.1,10^-3,10^2)
```

```
int_beta(runif(10,0,0.99),0.1,alpha_0=1,beta_0=1)
```

```
int_weibull(abs(rnorm(10)),0.1,k_0=2)
```

```
int_moge(runif(10,0.01,0.99),0.1,lambda_0=2,alpha_0=3,theta_0=4)
```

measure

Measures

Description

measure creates an object of class c("measure", "list").

as.measure attempts to coerce its argument x into an object of class c("measure", class(x)). If this is not possible x is returned unchanged.

is.measure returns TRUE if x is an R object with "measure" as one of its classes. It returns FALSE otherwise.

Usage

```
measure(s, acc, f = function(x, y) { abs(x - y) })
```

```
as.measure(x)
```

```
is.measure(x)
```

Arguments

s confidence level, e.g. s=0.05 for the standard 95 percent confidence interval.

acc accuracy achieved by error intervals.

f function used to compute error of intervals. See also 'Details'.

x an R object.

Value

measure returns an object of class c("measure", "list") with information regarding the error of a set of intervals.

as.measure returns an object of class c("measure", class(x)) with information contained in x if possible. Returns x otherwise.

is.measure returns TRUE if x is an R object with "measure" as one of its classes. FALSE otherwise.

Author(s)

Jesus Prada, <jesus.prada@estudiante.uam.es>

References

Link to the scientific paper

Prada, Jesus, and Jose Ramon Dorronsoro. "SVRs and Uncertainty Estimates in Wind Energy Prediction." *Advances in Computational Intelligence*. Springer International Publishing, 2015. 564-577,

with theoretical background for this package is provided below.

http://link.springer.com/chapter/10.1007/978-3-319-19222-2_47

Examples

```
measure(0.1,0.7)
```

```
measure(0.1,0.7,function(x,y){y-x})
```

```
l<-list(s=0.1,acc=0.78,f=function(x,y){abs(x-y)},err=0.02)
as.measure(l)
```

```
v<-c("a","b")
as.measure(v)
```

```
l<-list(s=0.1,acc=0.78,f=function(x,y){abs(x-y)},err=0.02)
is.measure(l)
res<-as.measure(l)
is.measure(res)
```

measure.default

Measure

Description

measure creates an object of class c("measure", "list").

Usage

```
## Default S3 method:  
measure(s, acc, f = function(x, y) { abs(x - y) })
```

Arguments

s confidence level, e.g. s=0.05 for the standard 95 percent confidence interval.
acc accuracy achieved by error intervals.
f function used to compute error of intervals. See also 'Details'.

Value

Returns an object of class c("measure", "list") with information regarding the error of a set of intervals.

Author(s)

Jesus Prada, <jesus.prada@estudiante.uam.es>

References

Link to the scientific paper

Prada, Jesus, and Jose Ramon Dorronsoro. "SVRs and Uncertainty Estimates in Wind Energy Prediction." *Advances in Computational Intelligence*. Springer International Publishing, 2015. 564-577,

with theoretical background for this package is provided below.

http://link.springer.com/chapter/10.1007/978-3-319-19222-2_47

Examples

```
measure(0.1, 0.7)  
  
measure(0.1, 0.7, function(x, y){y-x})
```

print.df_intervals *Printing Data Frames of Intervals*

Description

print objects of class df_interval.

Usage

```
## S3 method for class 'df_intervals'  
print(x, ...)
```

Arguments

x object of class `df_interval` to be printed.
... optional arguments.

Author(s)

Jesus Prada, <jesus.prada@estudiante.uam.es>

References

Link to the scientific paper

Prada, Jesus, and Jose Ramon Dorronsoro. "SVRs and Uncertainty Estimates in Wind Energy Prediction." *Advances in Computational Intelligence*. Springer International Publishing, 2015. 564-577,

with theoretical background for this package is provided below.

http://link.springer.com/chapter/10.1007/978-3-319-19222-2_47

See Also

[df_intervals](#)

Examples

```
res<-df_intervals(c("l","lm","n","nm","b","w"),rep(0.1,6))
print(res)
```

`print.error_interval` *Printing Error Intervals*

Description

print objects of class `error_interval`.

Usage

```
## S3 method for class 'error_interval'
print(x, ...)
```

Arguments

x object of class `error_interval` to be printed.
... optional arguments.

Author(s)

Jesus Prada, <jesus.prada@estudiante.uam.es>

References

Link to the scientific paper

Prada, Jesus, and Jose Ramon Dorronsoro. "SVRs and Uncertainty Estimates in Wind Energy Prediction." *Advances in Computational Intelligence*. Springer International Publishing, 2015. 564-577,

with theoretical background for this package is provided below.

http://link.springer.com/chapter/10.1007/978-3-319-19222-2_47

See Also

[error_interval](#)

Examples

```
res<-error_interval(rnorm(10))
print(res)
```

print.measure

Printing Measures

Description

print objects of class measure.

Usage

```
## S3 method for class 'measure'
print(x, ...)
```

Arguments

x object of class measure to be printed.
... optional arguments.

Author(s)

Jesus Prada, <jesus.prada@estudiante.uam.es>

References

Link to the scientific paper

Prada, Jesus, and Jose Ramon Dorronsoro. "SVRs and Uncertainty Estimates in Wind Energy Prediction." *Advances in Computational Intelligence*. Springer International Publishing, 2015. 564-577,

with theoretical background for this package is provided below.

http://link.springer.com/chapter/10.1007/978-3-319-19222-2_47

See Also

[measure](#)

Examples

```
res<-measure(0.1,0.7)
print(res)
```

`print.summary.error_interval`

Printing Error Intervals Summaries

Description

print objects of class `summary.error_interval`.

Usage

```
## S3 method for class 'summary.error_interval'
print(x, ...)
```

Arguments

`x` object of class `summary.error_interval` to be printed.
`...` optional arguments.

Author(s)

Jesus Prada, <jesus.prada@estudiante.uam.es>

References

Link to the scientific paper

Prada, Jesus, and Jose Ramon Dorrnsoro. "SVRs and Uncertainty Estimates in Wind Energy Prediction." *Advances in Computational Intelligence*. Springer International Publishing, 2015. 564-577,

with theoretical background for this package is provided below.

http://link.springer.com/chapter/10.1007/978-3-319-19222-2_47

See Also

[summary.error_interval](#)

Examples

```
res<-error_interval(rnorm(10))
summary(res)
```

print.summary.measure *Printing Measures Summaries*

Description

print objects of class `summary.measure`.

Usage

```
## S3 method for class 'summary.measure'  
print(x, ...)
```

Arguments

`x` object of class `summary.measure` to be printed.
`...` optional arguments.

Author(s)

Jesus Prada, <jesus.prada@estudiante.uam.es>

References

Link to the scientific paper

Prada, Jesus, and Jose Ramon Dorronsoro. "SVRs and Uncertainty Estimates in Wind Energy Prediction." *Advances in Computational Intelligence*. Springer International Publishing, 2015. 564-577,

with theoretical background for this package is provided below.

http://link.springer.com/chapter/10.1007/978-3-319-19222-2_47

See Also

[summary.measure](#)

Examples

```
res<-measure(0.1,0.7)  
summary(res)
```

Description

p_laplace computes the probability density function of a random variable that has a Laplace distribution with parameters μ and σ .

p_gaussian computes the probability density function of a random variable that has a Gaussian distribution with parameters μ and σ^2 .

p_beta computes the probability density function of a random variable that has a Beta distribution with parameters α and β .

p_weibull computes the probability density function of a random variable that has a Weibull distribution with parameters κ and λ .

p_moge computes the probability density function of a random variable that has a MOGE distribution with parameters λ, α and θ .

Usage

```
p_laplace(x, mu = 0, sigma = 1)
```

```
p_gaussian(x, mu = 0, sigma_cuad = 1)
```

```
p_beta(x, alpha = 1, beta = 1)
```

```
p_weibull(x, k = 1, lambda = 1)
```

```
p_moge(x, lambda = 1, alpha = 1, theta = 1)
```

Arguments

x	vector of points which values we want to compute.
mu	location or mean parameter of the Laplace or Gaussian distribution, respectively.
sigma	scale parameter of the Laplace distribution.
sigma_cuad	variance parameter of the Gaussian distribution.
alpha	shape1 parameter of the Beta distribution or second parameter of the MOGE distribution.
beta	shape2 parameter of the Beta distribution.
k	shape parameter of the Weibull distribution.
lambda	scale parameter of the Weibull distribution or first parameter of the MOGE distribution.
theta	third parameter of the MOGE distribution.

Value

Returns a numeric object corresponding to the value of the probability density function for the given *x* and distribution parameters.

Author(s)

Jesus Prada, <jesus.prada@estudiante.uam.es>

References

Link to the scientific paper

Prada, Jesus, and Jose Ramon Dorrnsoro. "SVRs and Uncertainty Estimates in Wind Energy Prediction." *Advances in Computational Intelligence*. Springer International Publishing, 2015. 564-577,

with theoretical background for this package is provided below.

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See Also

[dlaplace](#)

[dnorm](#)

[dbeta](#)

[dweibull](#)

Examples

```
p_laplace(0.3)
p_laplace(0.3,mu=0.35,sigma=0.2)
```

```
p_gaussian(0.3)
p_gaussian(0.3,mu=0.35,sigma_cuad=0.2)
```

```
p_beta(0.3)
p_beta(0.3,alpha=0.35,beta=0.2)
```

```
p_weibull(0.3)
p_weibull(0.3,k=0.35,lambda=0.2)
```

```
p_moge(0.3)
p_moge(0.3,lambda=0.2,alpha=0.3,theta=0.4)
```

sort_distributions *Sort Distributions by Better Error Intervals*

Description

sort_distributions orders a given set of distribution assumptions in order of intervals accuracy error in ascending or descending order.

Usage

```
sort_distributions(phi, errors, dists = c("n", "nm", "l", "lm", "w", "b",  
    "moge"), decreasing = FALSE, ...)
```

Arguments

phi	residual values used to compute the error interval.
errors	set of real errors corresponding to the predictions of a particular model.
dists	character vector with the distribution assumptions to test. See also 'Details'.
decreasing	logical, indicating whether or not distributions should be ordered by decreasing accuracy error.
...	additional arguments to be passed to functions error_interval and acc_intervals.

Details

Allowed distribution assumptions are:

- "n": Zero-mu Gaussian
- "nm": General Gaussian
- "l": Zero-mu Laplace
- "lm": General Laplace
- "b": Beta
- "w": Weibull
- "moge": Moge

Value

Returns an object of class c("df_intervals", "data.frame") with information of the distribution assumptions ordered by accuracy error.

Author(s)

Jesus Prada, <jesus.prada@estudiante.uam.es>

References

Link to the scientific paper

Prada, Jesus, and Jose Ramon Dorronsoro. "SVRs and Uncertainty Estimates in Wind Energy Prediction." *Advances in Computational Intelligence*. Springer International Publishing, 2015. 564-577,

with theoretical background for this package is provided below.

http://link.springer.com/chapter/10.1007/978-3-319-19222-2_47

See Also

[df_intervals](#) [error_interval](#) [acc_intervals](#) [order](#)

Examples

```
sort_distributions(rnorm(10),rnorm(10),decreasing=TRUE)
```

summary.error_interval

Error Intervals Summaries

Description

summary produces summaries for objects of class error_interval.

Usage

```
summary.error_interval(object, ...)
```

Arguments

object	object of class error_interval to be printed.
...	optional arguments.

Value

Object of class c("summary.error_interval", "list") corresponding to the summary of x.

Author(s)

Jesus Prada, <jesus.prada@estudiante.uam.es>

References

Link to the scientific paper

Prada, Jesus, and Jose Ramon Dorronsoro. "SVRs and Uncertainty Estimates in Wind Energy Prediction." *Advances in Computational Intelligence*. Springer International Publishing, 2015. 564-577,

with theoretical background for this package is provided below.

http://link.springer.com/chapter/10.1007/978-3-319-19222-2_47

See Also

[error_interval](#)

Examples

```
res<-error_interval(rnorm(10))
summary(res)
```

summary.measure

Measures Summaries

Description

summary produces summaries for objects of class measure.

Usage

```
summary.measure(object, ...)
```

Arguments

object	object of class measure to be printed.
...	optional arguments.

Value

Object of class c("summary.measure", "list") corresponding to the summary of x.

Author(s)

Jesus Prada, <jesus.prada@estudiante.uam.es>

References

Link to the scientific paper

Prada, Jesus, and Jose Ramon Dorronsoro. "SVRs and Uncertainty Estimates in Wind Energy Prediction." *Advances in Computational Intelligence*. Springer International Publishing, 2015. 564-577,

with theoretical background for this package is provided below.

http://link.springer.com/chapter/10.1007/978-3-319-19222-2_47

See Also

[measure](#)

Examples

```
res<-measure(0.1,0.7)
summary(res)
```


Index

acc_intervals, [2](#), [4](#), [22](#)
as.df_intervals (df_intervals), [4](#)
as.error_interval (error_interval), [7](#)
as.measure (measure), [12](#)

best_distribution, [3](#)

dbeta, [20](#)
df_intervals, [4](#), [4](#), [15](#), [22](#)
df_intervals.default, [6](#)
dlaplace, [20](#)
dnorm, [20](#)
dweibull, [20](#)

error_interval, [3](#), [4](#), [7](#), [11](#), [16](#), [17](#), [22](#), [23](#)
error_interval.default, [8](#)

int_beta (int_lap), [9](#)
int_gau (int_lap), [9](#)
int_gau_mu (int_lap), [9](#)
int_lap, [9](#)
int_lap_mu (int_lap), [9](#)
int_moge (int_lap), [9](#)
int_weibull (int_lap), [9](#)
is.df_intervals (df_intervals), [4](#)
is.error_interval (error_interval), [7](#)
is.measure (measure), [12](#)

measure, [3](#), [12](#), [17](#), [18](#), [24](#)
measure.default, [13](#)
multroot, [10](#), [11](#)

order, [22](#)

p_beta, [11](#)
p_beta (p_laplace), [19](#)
p_gaussian, [11](#)
p_gaussian (p_laplace), [19](#)
p_laplace, [11](#), [19](#)
p_moge, [11](#)
p_moge (p_laplace), [19](#)

p_weibull, [11](#)
p_weibull (p_laplace), [19](#)
print.df_intervals, [14](#)
print.error_interval, [15](#)
print.measure, [16](#)
print.summary.error_interval, [17](#)
print.summary.measure, [18](#)

sort_distributions, [21](#)
summary, [17](#), [18](#)
summary.error_interval, [22](#)
summary.measure, [23](#)