

Package ‘wodds’

April 15, 2022

Type Package

Title Calculates Whisker Odds

Version 0.1.0

Description Descriptive statistics for large data tend to be low resolution on the tails.

Whisker Odds generate a table of descriptive statistics for large data. This is the same as letter-values, but with an alternative naming of depths which allow for depths beyond 26. For a reference to letter-values see 'Heike Hofmann' and 'Hadley Wickham' and 'Karen Kafadar' (2017) <[doi:10.1080/10618600.2017.1305277](https://doi.org/10.1080/10618600.2017.1305277)>.

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Encoding UTF-8

RoxygenNote 7.1.2

Imports dplyr, stats, magrittr, tibble, glue, purrr

URL <https://github.com/alexhallam/wodds>

BugReports <https://github.com/alexhallam/wodds/issues>

Suggests testthat (>= 3.0.0)

Config/testthat/edition 3

NeedsCompilation no

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Repository CRAN

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get_depth_from_n *Get depth from sample size*

Description

Calculates the depth given a sample size and alpha level

Usage

```
get_depth_from_n(n, alpha = 0.05)
```

Arguments

n	an integer scalar sample size
alpha	alpha level such as 0.1, 0.05, 0.01. An alpha of 0.05 would be associated with a 95 percent confidence interval

Value

an integer depth

Examples

```
get_depth_from_n(1e4L, 0.05)
```

get_n_from_depth *Get sample size from depth*

Description

Calculates the sample size needed given an alpha level and depth

Usage

```
get_n_from_depth(d, alpha = 0.05, conservative = TRUE)
```

Arguments

d	an integer depth
alpha	alpha level such as 0.1, 0.05, 0.01. An alpha of 0.05 would be associated with a 95 percent confidence interval
conservative	a bool. default is FALSE. If TRUE then a conservative (larger) sample size is returned.

Value

a float sample size

Examples

```
get_n_from_depth(7L, 0.01)
```

<code>make_wodd_name</code>	<i>make_wodd_name</i>
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Description

`make_wodd_name` a private function

Usage

```
make_wodd_name(index)
```

Arguments

index int

Value

A vector

<code>raw_wodd</code>	<i>raw_wodd</i>
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Description

`raw_wodd` a private function

Usage

```
raw_wodd(index)
```

Arguments

index int

Value

A vector

```
select_wodd_name_from_table  
      select_wodd_name_from_table
```

Description

select_wodd_name_from_table a private function

Usage

```
select_wodd_name_from_table(index)
```

Arguments

index int

Value

A vector

Examples

```
select_wodd_name_from_table(1L)
```

```
wodds            Calculate whisker odds
```

Description

makes whisker odds

Usage

```
wodds(  
  y,  
  alpha = 0.05,  
  include_tail_area = FALSE,  
  include_outliers = FALSE,  
  include_depth = FALSE  
)
```

Arguments

<code>y</code>	A vector of values
<code>alpha</code>	the alpha level, such as 0.05 which is the compliment of the confidence interval, such as 0.95
<code>include_tail_area</code>	a binary. If true then include a column of tail area $2^{(i)}$
<code>include_outliers</code>	a binary. If true include a column of outliers beyond the last wodd depth
<code>include_depth</code>	a binary. If true include a column indicating the depth of the letter value

Value

	A dataframe of wodds
<code>lower_value</code>	lower value
<code>wodd_name</code>	Name of wodd
<code>upper_value</code>	upper value

Examples

```
set.seed(42)
wodds(rnorm(1e4, 0, 1))
```

<code>wodd_format</code>	<i>wodd_format</i>
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Description

`wodd_format` a private function

Usage

```
wodd_format(wodd_name)
```

Arguments

<code>wodd_name</code>	string. "S0", "S1", "M". etc
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Value

A string

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