

Package ‘xmrr’

July 23, 2018

Type Package

Title Generate XMR Control Chart Data from Time-Series Data

Description XMRs combine X-Bar control charts and Moving Range control charts. These functions also will recalculate the reference lines when significant change has occurred.

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LazyData TRUE

License GPL-3

BugReports <https://github.com/Zanidean/xmrr/issues>

Imports dplyr, tidyr, ggplot2

RoxygenNote 6.0.1

Suggests testthat, knitr, rmarkdown

VignetteBuilder knitr

NeedsCompilation no

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`xmr`*Generate the XMR data for any time-series data.*

Description

Used to calculate XMR data.

Usage

```
xmr(df, measure, recalc = T, reuse, interval, longrun, shortrun, testing)
```

Arguments

<code>df</code>	The dataframe or tibble to calculate from. Data must be in a tidy format. At least one variable for time and one variable for measure.
<code>measure</code>	The column containing the measure. Must be in numeric format.
<code>recalc</code>	Logical: if you'd like it to recalculate bounds. Defaults to True
<code>reuse</code>	Logical: Should points be re-used in calculations? Defaults to False
<code>interval</code>	The interval you'd like to use to calculate the averages. Defaults to 5.
<code>longrun</code>	Used to determine rules for long run. First point is the 'n' of points used to recalculate with, and the second is to determine what qualifies as a long run. Default is <code>c(5,8)</code> which uses the first 5 points of a run of 8 to recalculate the bounds. If a single value is used, then that value is used twice i.e. <code>c(6,6)</code>
<code>shortrun</code>	Used to determine rules for a short run. The first point is the minimum number of points within the set to qualify a shortrun, and the second is the length of a possible set. Default is <code>c(3,4)</code> which states that 3 of 4 points need to pass the test to be used in a calculation. If a single value is used, then that value is used twice i.e. <code>c(3,3)</code>
<code>testing</code>	Logical to print test results

Examples

```
## Not run: xmr(df, "Measure", recalc = T)
## Not run: xmr(df, "Measure", recalc = T, shortrun = c(3,4), longrun = c(5,8))
```

`xmr_chart`*Generate the XMR chart for XMR data*

Description

Useful for diagnostics on xmr, and just visualizing the data.

Usage

```
xmr_chart(df, time, measure, boundary_linetype = "dashed",
          central_linetype = "dotted", boundary_colour = "#d02b27",
          point_colour = "#7ECBB5", point_size = 2, line_width = 0.5,
          text_size = 9)
```

Arguments

<code>df</code>	Output from <code>xmR()</code>
<code>time</code>	Time column
<code>measure</code>	Measure
<code>boundary_linetype</code>	Type of line for upper and lower boundary lines. Defaults to "dashed".
<code>central_linetype</code>	Type of line for central line. Defaults to "dotted".
<code>boundary_colour</code>	Colour of line for upper and lower boundary lines. Defaults to "#d02b27".
<code>point_colour</code>	Colour of points. Defaults to "#7ECBB5".
<code>point_size</code>	Size of points. Defaults to 2.
<code>line_width</code>	Width of lines. Defaults to 0.5.
<code>text_size</code>	Size of chart text. Defaults to 9.

Examples

```
## Not run: xmr_chart(df, "Year", "Measure")
```

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