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.

Version 1.0.36
Date 2018-07-20
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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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Repository CRAN
Date/Publication 2018-07-23 14:50:03 UTC

R topics documented:

xmr ................................................................. 2
xmr_chart ....................................................... 3

Index 4
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

- `df`: 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.
- `measure`: The column containing the measure. Must be in numeric format.
- `recalc`: Logical: if you’d like it to recalculate bounds. Defaults to True.
- `reuse`: Logical: Should points be re-used in calculations? Defaults to False.
- `interval`: The interval you’d like to use to calculate the averages. Defaults to 5.
- `longrun`: 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 c(5,8) 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. c(6,6)
- `shortrun`: 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 c(3,4) 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. c(3,3)
- `testing`: 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*

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**Description**

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

**Usage**

```r
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**

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

**Examples**

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

xmr, 2
xmr_chart, 3