Package 'xmrr'

July 21, 2025

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 1.1.1

Date 2020-06-08

Maintainer Alex Zanidean <AZanidean@mhc.ab.ca>

LazyData TRUE

License GPL-3

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

Imports dplyr, tidyr, ggplot2, purrr, rlang, tibble, qpdf

RoxygenNote 7.1.0

Suggests testthat, knitr, rmarkdown

VignetteBuilder knitr

NeedsCompilation no

Author Alex Zanidean [aut, cre]

Repository CRAN

Date/Publication 2020-06-08 21:20:03 UTC

Contents

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,
  prefer_longrun
)
```

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
prefer_longrun	Logical if you want to first test for long-runs or for short-runs.

xmr2 *Tidyeval Version of xmr()*

Description

Used to calculate XMR data. Now works with more tidy workflows.

Usage

```
xmr2(dataframe, measure, ...)
```

Arguments

dataframe	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.
...	Arguments to pipe to xmr

xmr_chart *Generate the XMR chart for XMR data*

Description

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

Usage

```
xmr_chart(
  dataframe,
  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

dataframe	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.

---

xmr_chart2 *Generate the XMR chart for XMR data.*

Description

Useful for diagnostics on xmr, and just visualizing the data. Now works with more tidy workflows.

Usage

```
xmr_chart2(dataframe, time, measure, ...)
```

Arguments

dataframe	Output from xmR()
time	Time column
measure	Measure
...	Arguments to pipe to xmr_chart()

Index