## CRAN mondate

# This is the code from Gabor's email.

# I'm not exactly sure what result he was looking for.

# Could try running using version of mondate on CRAN,

# then run again using current github version.

library(mondate)

#(x <- mondate.ymd(2000:2003, 6, 15)) # data

#(from <- mondate(cut(min(x), breaks = "month", right = FALSE)))

#(to <- mondate(as.Date(max(x)) - 1) + 1) # - 1 day + 1 month

#mondate(seq(as.Date(from), as.Date(to), by = "month"))

# So see better what's going on, make 'x' only 2 datapts 1 yr apart

(x <- mondate.ymd(2000:2001, 6, 15)) # data

(from <- mondate(cut(min(x), breaks = "month", right = FALSE)))

(to <- mondate(as.Date(max(x)) - 1) + 1) # - 1 day + 1 month

mondate(seq(as.Date(from), as.Date(to), by = "month"))

# To see the half-open/half-closed monthly intervals covering the data,

# set attr.breaks = TRUE and re-cut.

(cx <- cut.mondate(x, breaks = "month", attr.breaks = TRUE))

(brks <- attr(cx, "breaks"))

class(brks)

(cx2 <- cut.mondate(x, breaks = brks))

levels(cx2)

# Hmm. Why is first interval left-closed?

# Do the same thing with two "Date's"

(d <- as.Date(x))

(cd <- cut.mondate(d, breaks = "month", attr.breaks = TRUE)) # Error!

#Error in cut.mondate(d, breaks = "month", attr.breaks = TRUE) :

# 'x' must be a mondate

# This generates the breaks using brute force -- seq

from <- mondate.ymd(year(min(x)), month(min(x))) - 1

to <- mondate.ymd(year(max(x)), month(max(x)))

(brks.seq <- seq(from, to, by = 1))

cut(x, breaks = brks.seq)

# Voila! the first interval is left-closed!

# Hmm. First interval is not half-closed with cut.default

cut(c(.5, 12.5), breaks = 0:13)

## Github mondate

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| --- |
| # So see better what's going on, make 'x' only 2 datapts 1 yr apart  > (x <- mondate.ymd(2000:2001, 6, 15)) # data  mondate: timeunits="months"  [1] 06/15/2000 06/15/2001  > (from <- mondate(cut(min(x), breaks = "month", right = FALSE)))  mondate: timeunits="months"  [1] 05/31/2000  > (to <- mondate(as.Date(max(x)) - 1) + 1) # - 1 day + 1 month  mondate: timeunits="months"  [1] 07/15/2001  > mondate(seq(as.Date(from), as.Date(to), by = "month"))  mondate: timeunits="months"  [1] 05/31/2000 07/01/2000 07/31/2000 08/31/2000 10/01/2000 10/31/2000  [7] 12/01/2000 12/31/2000 01/31/2001 03/03/2001 03/31/2001 05/01/2001  [13] 05/31/2001 07/01/2001  > # To see the half-open/half-closed monthly intervals covering the data,  > # set attr.breaks = TRUE and re-cut.  > (cx <- cutmondate(x, breaks = "month", attr.breaks = TRUE))  [1] 06/30/2000 06/30/2001  attr(,"breaks")  mondate: timeunits="months"  [1] 05/31/2000 06/30/2000 07/31/2000 08/31/2000 09/30/2000 10/31/2000  [7] 11/30/2000 12/31/2000 01/31/2001 02/28/2001 03/31/2001 04/30/2001  [13] 05/31/2001 06/30/2001  13 Levels: 06/30/2000 07/31/2000 08/31/2000 09/30/2000 ... 06/30/2001  > (brks <- attr(cx, "breaks"))  mondate: timeunits="months"  [1] 05/31/2000 06/30/2000 07/31/2000 08/31/2000 09/30/2000 10/31/2000  [7] 11/30/2000 12/31/2000 01/31/2001 02/28/2001 03/31/2001 04/30/2001  [13] 05/31/2001 06/30/2001  > class(brks)  [1] "mondate"  attr(,"package")  [1] "mondate"  > (cx2 <- cutmondate(x, breaks = brks))  [1] (05/31/2000,06/30/2000] (05/31/2001,06/30/2001]  13 Levels: (05/31/2000,06/30/2000] ... (05/31/2001,06/30/2001]  > levels(cx2)  [1] "(05/31/2000,06/30/2000]" "(06/30/2000,07/31/2000]"  [3] "(07/31/2000,08/31/2000]" "(08/31/2000,09/30/2000]"  [5] "(09/30/2000,10/31/2000]" "(10/31/2000,11/30/2000]"  [7] "(11/30/2000,12/31/2000]" "(12/31/2000,01/31/2001]"  [9] "(01/31/2001,02/28/2001]" "(02/28/2001,03/31/2001]"  [11] "(03/31/2001,04/30/2001]" "(04/30/2001,05/31/2001]"  [13] "(05/31/2001,06/30/2001]"  > # Do the same thing with two "Date's"  > (d <- as.Date(x))  [1] "2000-06-15" "2001-06-15"  > (cd <- cutmondate(d, breaks = "month", attr.breaks = TRUE))  [1] 2000-06-01 2001-06-01  attr(,"breaks")  [1] "2000-06-01" "2000-07-01" "2000-08-01" "2000-09-01" "2000-10-01"  [6] "2000-11-01" "2000-12-01" "2001-01-01" "2001-02-01" "2001-03-01"  [11] "2001-04-01" "2001-05-01" "2001-06-01" "2001-07-01"  13 Levels: 2000-06-01 2000-07-01 2000-08-01 2000-09-01 ... 2001-06-01  > (brks <- attr(cd, "breaks"))  [1] "2000-06-01" "2000-07-01" "2000-08-01" "2000-09-01" "2000-10-01"  [6] "2000-11-01" "2000-12-01" "2001-01-01" "2001-02-01" "2001-03-01"  [11] "2001-04-01" "2001-05-01" "2001-06-01" "2001-07-01"  > class(brks)  [1] "Date"  > (cd2 <- cutmondate(d, breaks = brks))  [1] [2000-06-01,2000-07-01) [2001-06-01,2001-07-01)  13 Levels: [2000-06-01,2000-07-01) ... [2001-06-01,2001-07-01)  > levels(cd2)  [1] "[2000-06-01,2000-07-01)" "[2000-07-01,2000-08-01)"  [3] "[2000-08-01,2000-09-01)" "[2000-09-01,2000-10-01)"  [5] "[2000-10-01,2000-11-01)" "[2000-11-01,2000-12-01)"  [7] "[2000-12-01,2001-01-01)" "[2001-01-01,2001-02-01)"  [9] "[2001-02-01,2001-03-01)" "[2001-03-01,2001-04-01)"  [11] "[2001-04-01,2001-05-01)" "[2001-05-01,2001-06-01)"  [13] "[2001-06-01,2001-07-01)" |
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