

# Package ‘ATR’

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**Title** Alternative Tree Representation

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**Version** 0.1-1

**Description** Plot party trees in left-right orientation instead of the classical top-down layout.

**Depends** grid, partykit

**Suggests** trtf, mlbench

**Imports** stats

**License** GPL-2

**NeedsCompilation** no

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## Contents

|                  |          |
|------------------|----------|
| rotate . . . . . | 2        |
| <b>Index</b>     | <b>4</b> |

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|        |                                            |
|--------|--------------------------------------------|
| rotate | <i>Change the class of a party object.</i> |
|--------|--------------------------------------------|

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## Description

Adds a new class to party objects allowing rotated tree visualisations.

## Usage

```
rotate(m, to = "left", ...)
```

## Arguments

|     |                                                      |
|-----|------------------------------------------------------|
| m   | an object of class party                             |
| to  | a character, only left is implemented at the moment. |
| ... | additional arguments, currently ignored.             |

## Details

Adds a new class allowing for improved tree printing.

## Note

This package was written by the students participating in the Advanced R Programming course taught in spring semester 2017 at University of Zurich.

## Examples

```
data("airquality", package = "datasets")
m <- ctree(Wind ~ . , data = airquality)
plot(rotate(m), main = "TREE", tnx = 1.5)

if (require("trtf")) {
  data("Ozone", package = "mlbench")
  Ozone <- subset(Ozone, complete.cases(Ozone))
  Ozone <- as.data.frame(lapply(Ozone, function(x) {
    x <- x[, drop = TRUE]
    if (is.factor(x)) return(as.ordered(x))
    x
  })))
  response <- "V4"
  Ozone[[response]] <- as.numeric(Ozone[[response]])

  ns <- 20
  fm <- V4 ~ V1 + V2 + V3 + V5 + V6 + V7 + V8 + V9 + V10 + V11 + V12 + V13
  mtry <- ceiling(length(all.vars(fm[[3]])) / 3)
  var_m <- numeric_var("V4", support = quantile(Ozone[[response]], prob = c(.1, .9)),
    add = range(Ozone[[response]]) -
      quantile(Ozone[[response]], prob = c(.1, .9)),
```

```
        bounds = c(0, Inf))

B_m <- Bernstein_basis(var_m, order = 4, ui = "increasing")
uc_ctm_Ozone <- ctm(B_m, data = Ozone, todistr = "Normal")

tt_Ozone <- trafotree(uc_ctm_Ozone, formula = fm, data = Ozone,
                      control = ctree_control(mincriterion = .95, minsplit = 2*ns,
                                              minbucket = ns))

plot(rotate(tt_Ozone), tp_args = list(type = "density", id = FALSE,
                                       ylines = 0, K = 100, fill = "lightgrey"),
     terminal_panel = trtf::node_mlt)
}
```

# Index

\* **tree**  
    rotate, [2](#)  
rotate, [2](#)