

Package ‘edm1’

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Title Simplify Complex Data Manipulation

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Description Provides complex sorting algorithms. Provides date manipulation algorithms. In addition to providing handy functions to discretize variables, an SQL joins alternatives, a set of function to work with geographical coordinates, and other functions to work with text mining.

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Contents

colins_datf	2
cut_v	3
diff_datf	3
groupr_datf	4
id_keepr	5
insert_datf	6
intersect_mod	7
nestr_datf1	8
nestr_datf2	9
paste_datf	10
see_datf	10
swipr	12
unique_datf	13
val_replacer	13
vec_in_datf	14
vlookup_datf	15
wider_datf	16

Index	17
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colins_datf	<i>colins_datf</i>
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Description

Allow to insert vectors into a dataframe.

Usage

```
colins_datf(inpt_datf, target_col = list(), target_pos = list())
```

Arguments

<code>inpt_datf</code>	is the dataframe where vectors will be inserted
<code>target_col</code>	is a list containing all the vectors to be inserted
<code>target_pos</code>	is a list containing the vectors made of the columns names or numbers where the associated vectors from <code>target_col</code> will be inserted after

Examples

```
datf1 <- data.frame("frst_col"=c(1:5), "scd_col"=c(5:1))

print(colins_datf(inpt_datf=datf1, target_col=list(c("oui", "oui", "oui", "non", "non"),
  c("u", "z", "z", "z", "u")),
  target_pos=list(c("frst_col", "scd_col"), c("scd_col"))))

#  frst_col cur_col scd_col cur_col.1 cur_col
#1      1      oui      5      oui      u
#2      2      oui      4      oui      z
#3      3      oui      3      oui      z
#4      4      non      2      non      z
#5      5      non      1      non      u

print(colins_datf(inpt_datf=datf1, target_col=list(c("oui", "oui", "oui", "non", "non"),
  c("u", "z", "z", "z", "u")),
  target_pos=list(c(1, 2), c("frst_col"))))

#  frst_col cur_col scd_col cur_col cur_col
#1      1      oui      5      u      oui
#2      2      oui      4      z      oui
#3      3      oui      3      z      oui
#4      4      non      2      z      non
#5      5      non      1      u      non
```

`cut_v`*cut_v*

Description

Allow to convert a vector to a dataframe according to a separator.

Usage

```
cut_v(inpt_v, sep_ = "")
```

Arguments

`inpt_v` is the input vector
`sep_` is the separator of the elements in `inpt_v`, defaults to ""

Examples

```
print(cut_v(inpt_v=c("oui", "non", "oui", "non")))

#      X.o. X.u. X.i.
#oui  "o"  "u"  "i"
#non  "n"  "o"  "n"
#oui  "o"  "u"  "i"
#non  "n"  "o"  "n"

print(cut_v(inpt_v=c("ou-i", "n-on", "ou-i", "n-on"), sep_="-"))

#      X.ou. X.i.
#ou-i  "ou"  "i"
#n-on  "n"   "on"
#ou-i  "ou"  "i"
#n-on  "n"   "on"
```

`diff_datf`*diff_datf*

Description

Returns a vector with the coordinates of the cell that are not equal between 2 dataframes (row, column).

Usage

```
diff_datf(datf1, datf2)
```

Arguments

`datf1` is an an input dataframe
`datf2` is an an input dataframe

Examples

```
datf1 <- data.frame(c(1:6), c("oui", "oui", "oui", "oui", "oui", "oui"), c(6:1))

datf2 <- data.frame(c(1:7), c("oui", "oui", "oui", "oui", "non", "oui", "zz"))

print(diff_datf(datf1=datf1, datf2=datf2))

#[1] 5 1 5 2
```

groupr_datf	<i>groupr_datf</i>
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Description

Allow to create groups from a dataframe. Indeed, you can create conditions that lead to a flag value for each cell of the input dataframe according to the cell value. This function is based on `see_datf` and `nestr_datf2` functions.

Usage

```
groupr_datf(
  inpt_datf,
  condition_lst,
  val_lst,
  conjunction_lst,
  rtn_val_pos = c()
)
```

Arguments

<code>inpt_datf</code>	is the input dataframe
<code>condition_lst</code>	is a list containing all the condition as a vector for each group
<code>val_lst</code>	is a list containing all the values associated with <code>condition_lst</code> as a vector for each group
<code>conjunction_lst</code>	is a list containing all the conjunctions associated with <code>condition_lst</code> and <code>val_lst</code> as a vector for each group
<code>rtn_val_pos</code>	is a vector containing all the group flag value like this ex: <code>c("flag1", "flag2", "flag3")</code>

Examples

```
interactive()

datf1 <- data.frame(c(1, 2, 1), c(45, 22, 88), c(44, 88, 33))

val_lst <- list(list(c(1), c(1)), list(c(2)), list(c(44, 88)))

condition_lst <- list(c(">", "<"), c("%%"), c("==", "=="))
```

```

conjunction_lst <- list(c("|"), c(), c("|"))

rtn_val_pos <- c("+", "++", "+++")

print(groupr_datf(inpt_datf=datf1, val_lst=val_lst, condition_lst=condition_lst,
conjunction_lst=conjunction_lst, rtn_val_pos=rtn_val_pos))

#      X1  X2  X3
#1 <NA>   +  +++
#2    ++  ++  +++
#3 <NA> +++   +

```

<i>id_keepr</i>	<i>id_keepr_datf</i>
-----------------	----------------------

Description

Allow to get the original indexes after multiple equality comparaison according to the original number of row

Usage

```
id_keepr(inpt_datf, col_v = c(), el_v = c(), rstr_l = NA)
```

Arguments

<i>inpt_datf</i>	is the input dataframe
<i>col_v</i>	is the vector containing the column numbers or names to be compared to their respective elements in "el_v"
<i>el_v</i>	is a vector containing the elements that may be contained in their respective column described in "col_v"
<i>rstr_l</i>	is a list containing the vector composed of the indexes of the elements chosen for each comparison. If the length of the list is inferior to the lenght of comparisons, so the last vector of <i>rstr_l</i> will be the same as the last one to fill make <i>rstr_l</i> equal in term of length to <i>col_v</i> and <i>el_v</i>

Examples

```

datf1 <- data.frame(c("oui", "oui", "oui", "non", "oui"),
  c("opui", "op", "op", "zez", "zez"), c(5:1), c(1:5))

print(id_keepr(inpt_datf=datf1, col_v=c(1, 2), el_v=c("oui", "op")))

#[1] 2 3

print(id_keepr(inpt_datf=datf1, col_v=c(1, 2), el_v=c("oui", "op"),
  rstr_l=list(c(1:5), c(3, 2, 2, 2, 3))))

#[1] 2 3

```

```
print(id_keepr(inpt_datf=datf1, col_v=c(1, 2), el_v=c("oui", "op"),
  rstr_l=list(c(1:5), c(3))))

#[1] 3

print(id_keepr(inpt_datf=datf1, col_v=c(1, 2), el_v=c("oui", "op"), rstr_l=list(c(1:5))))

#[1] 2 3
```

insert_datf	<i>edml insert_datf</i>
-------------	-------------------------

Description

Allow to insert dataframe into another dataframe according to coordinates (row, column) from the dataframe that will be inserted

Usage

```
insert_datf(datf_in, datf_ins, ins_loc)
```

Arguments

datf_in	is the dataframe that will be inserted
datf_ins	is the dataset to be inserted
ins_loc	is a vector containg two parameters (row, column) of the begining for the insertion

Examples

```
datf1 <- data.frame(c(1, 4), c(5, 3))

datf2 <- data.frame(c(1, 3, 5, 6), c(1:4), c(5, 4, 5, "ereer"))

print(insert_datf(datf_in=datf2, datf_ins=datf1, ins_loc=c(4, 2)))

#   c.1..3..5..6. c.1.4. c.5..4..5...ereer..
# 1             1      1                    5
# 2             3      2                    4
# 3             5      3                    5
# 4             6      1                    5

print(insert_datf(datf_in=datf2, datf_ins=datf1, ins_loc=c(3, 2)))

#   c.1..3..5..6. c.1.4. c.5..4..5...ereer..
# 1             1      1                    5
# 2             3      2                    4
# 3             5      1                    5
# 4             6      4                    3

print(insert_datf(datf_in=datf2, datf_ins=datf1, ins_loc=c(2, 2)))
```

```
#   c.1..3..5..6. c.1.4. c.5..4..5...ereer..
# 1                1      1                    5
# 2                3      1                    5
# 3                5      4                    3
# 4                6      4                ereer
```

intersect_mod	<i>intersect_mod</i>
---------------	----------------------

Description

Returns the mods that have elements in common

Usage

```
intersect_mod(datf, inter_col, mod_col, n_min, descendly_ordered = NA)
```

Arguments

`datf` is the input dataframe

`inter_col` is the column name or the column number of the values that may be commun between the different mods

`mod_col` is the column name or the column number of the mods in the dataframe

`n_min` is the minimum elements in common a mod should have to be taken in count

`ordered_descendly` in case that the elements in commun are numeric, this option can be enabled by giving a value of TRUE or FALSE see examples

Examples

```
datf <- data.frame("col1"=c("oui", "oui", "oui", "oui", "oui", "oui",  
                           "non", "non", "non", "non", "ee", "ee", "ee"), "col2"=c(1:6, 2:5, 1:3))
```

```
print(intersect_mod(datf=datf, inter_col=2, mod_col=1, n_min=2))
```

```
   col1 col2
2   oui   2
3   oui   3
7  non   2
8  non   3
12  ee   2
13  ee   3
```

```
print(intersect_mod(datf=datf, inter_col=2, mod_col=1, n_min=3))
```

```
   col1 col2
2   oui   2
3   oui   3
4   oui   4
5   oui   5
7  non   2
8  non   3
```

```
9   non    4
10  non    5
```

```
print(intersect_mod(datf=datf, inter_col=2, mod_col=1, n_min=5))
```

```
   col1 col2
1   oui    1
2   oui    2
3   oui    3
4   oui    4
5   oui    5
6   oui    6
```

```
datf <- data.frame("col1"=c("non", "non", "oui", "oui", "oui", "oui",
                             "non", "non", "non", "non", "ee", "ee", "ee"), "col2"=c(1:6, 2:5, 1
```

```
print(intersect_mod(datf=datf, inter_col=2, mod_col=1, n_min=3))
```

```
   col1 col2
8   non    3
9   non    4
10  non    5
3   oui    3
4   oui    4
5   oui    5
```

nestr_datf1

nestr_datf1

Description

Allow to write a value (1a) to a dataframe (1b) to its cells that have the same coordinates (row and column) than the cells whose value is equal to a another special value (2a), from another another dataframe (2b). The value (1a) depends of the cell value coordinates of the third dataframe (3b). If a cell coordinates (1c) of the first dataframe (1b) does not correspond to the coordinates of a good returning cell value (2a) from the dataframe (2b), so this cell (1c) can have its value changed to the same cell coordinates value (3a) of a third dataframe (4b), if (4b) is not set to NA.

Usage

```
nestr_datf1(
  inptf_datf,
  inptt_pos_datf,
  nestr_datf,
  yes_val = TRUE,
  inptt_neg_datf = NA
)
```

Arguments

`inptf_datf` is the input dataframe (1b)

`inptt_pos_datf`
 is the dataframe (2b) that corresponds to the (1a) values
`nestr_datf` is the dataframe (2b) that has the special value (2a)
`yes_val` is the special value (2a)
`inptt_neg_datf`
 is the dataframe (4b) that has the (3a) values, defaults to NA

Examples

```
print(nestr_datf1(inptf_datf=data.frame(c(1, 2, 1), c(1, 5, 7)),
  inptt_pos_datf=data.frame(c(4, 4, 3), c(2, 1, 2)),
  inptt_neg_datf=data.frame(c(44, 44, 33), c(12, 12, 12)),
  nestr_datf=data.frame(c(TRUE, FALSE, TRUE), c(FALSE, FALSE, TRUE)), yes_val=TRUE))

#   c.1..2..1. c.1..5..7.
#1         4         12
#2        44         12
#3         3          2

print(nestr_datf1(inptf_datf=data.frame(c(1, 2, 1), c(1, 5, 7)),
  inptt_pos_datf=data.frame(c(4, 4, 3), c(2, 1, 2)),
  inptt_neg_datf=NA,
  nestr_datf=data.frame(c(TRUE, FALSE, TRUE), c(FALSE, FALSE, TRUE)), yes_val=TRUE))

#   c.1..2..1. c.1..5..7.
#1         4          1
#2         2          5
#3         3          2
```

<code>nestr_datf2</code>	<i>nestr_datf2</i>
--------------------------	--------------------

Description

Allow to write a special value (1a) in the cells of a dataframe (1b) that correspond (row and column) to those of another dataframe (2b) that return another special value (2a). The cells whose coordinates do not match the coordinates of the dataframe (2b), another special value can be written (3a) if not set to NA.

Usage

```
nestr_datf2(inptf_datf, rtn_pos, rtn_neg = NA, nestr_datf, yes_val = T)
```

Arguments

`inptf_datf` is the input dataframe (1b)
`rtn_pos` is the special value (1a)
`rtn_neg` is the special value (3a)
`nestr_datf` is the dataframe (2b)
`yes_val` is the special value (2a)

Examples

```
print(nestr_datf2(inptf_datf=data.frame(c(1, 2, 1), c(1, 5, 7)), rtn_pos="yes",
  rtn_neg="no", nestr_datf=data.frame(c(TRUE, FALSE, TRUE), c(FALSE, FALSE, TRUE)), yes_val=
  # c.1..2..1. c.1..5..7.
  #1          yes          no
  #2          no           no
  #3          yes          yes
```

paste_datf

paste_datf

Description

Return a vector composed of pasted elements from the input dataframe at the same index.

Usage

```
paste_datf(inpt_datf, sep = "")
```

Arguments

`inpt_datf` is the input dataframe
`sep` is the separator between pasted elements, defaults to ""

Examples

```
print(paste_datf(inpt_datf=data.frame(c(1, 2, 1), c(33, 22, 55))))
#[1] "133" "222" "155"
```

see_datf

see_datf

Description

Allow to return a dataframe with special value cells (ex: TRUE) where the condition entered are respected and another special value cell (ex: FALSE) where these are not

Usage

```
see_datf(
  datf,
  condition_l,
  val_l,
  conjunction_l = c(),
  rt_val = TRUE,
  f_val = FALSE
)
```

Arguments

<code>datf</code>	is the input dataframe
<code>condition_l</code>	is the vector of the possible conditions (" <code>==</code> ", " <code>></code> ", " <code><</code> ", " <code>!=</code> ", " <code>%%</code> ", " <code>reg</code> ", " <code>not_reg</code> ", " <code>sup_nchar</code> ", " <code>inf_nchar</code> ", " <code>nchar</code> ") (equal to some elements in a vector, greater than, lower than, not equal to, is divisible by, the regex condition returns TRUE, the regex condition returns FALSE, the length of the elements is strictly superior to X, the length of the element is strictly inferior to X, the length of the element is equal to one element in a vector), you can put the same condition n times.
<code>val_l</code>	is the list of vectors containing the values or vector of values related to <code>condition_l</code> (so the vector of values has to be placed in the same order)
<code>conjunction_l</code>	contains the and or conjunctions, so if the length of <code>condition_l</code> is equal to 3, there will be 2 conjunctions. If the length of <code>conjunction_l</code> is inferior to the length of <code>condition_l</code> minus 1, <code>conjunction_l</code> will match its goal length value with its last argument as the last arguments. For example, <code>c("&", "l", "&")</code> with a goal length value of 5 → <code>c("&", "l", "&", "&", "&")</code>
<code>rt_val</code>	is a special value cell returned when the conditions are respected
<code>f_val</code>	is a special value cell returned when the conditions are not respected

Details

This function will return an error if number only comparative conditions are given in addition to having character values in the input dataframe.

Examples

```
datf1 <- data.frame(c(1, 2, 4), c("a", "a", "zu"))

print(see_datf(datf=datf1, condition_l=c("nchar"), val_l=list(c(1))))

#      X1      X2
#1 TRUE   TRUE
#2 TRUE   TRUE
#3 TRUE FALSE

print(see_datf(datf=datf1, condition_l=c("=="), val_l=list(c("a", 1))))

#      X1      X2
#1 TRUE   TRUE
#2 FALSE  TRUE
#3 FALSE FALSE

print(see_datf(datf=datf1, condition_l=c("nchar"), val_l=list(c(1, 2))))

#      X1      X2
#1 TRUE   TRUE
#2 TRUE   TRUE
#3 TRUE   TRUE

print(see_datf(datf=datf1, condition_l=c("not_reg"), val_l=list("[a-z]")))
```

```
#      X1      X2
#1 TRUE FALSE
#2 TRUE FALSE
#3 TRUE FALSE
```

swipr

swipr

Description

Returns an ordered dataframes according to the elements order given. The input datafram has two columns, one with the ids which can be bonded to multiple elements in the other column.

Usage

```
swipr(inpt_datf, how_to = c(), id_w = 2, id_ids = 1)
```

Arguments

<code>inpt_datf</code>	is the input dataframe
<code>how_to</code>	is a vector containing the elements in the order wanted
<code>id_w</code>	is the column number or the column name of the elements
<code>id_ids</code>	is the column number or the column name of the ids

Examples

```
datf <- data.frame("col1"=c("Af", "Al", "Al", "Al", "Arg", "Arg", "Arg", "Arm", "Arm", "A
      "col2"=c("B", "B", "G", "S", "B", "S", "G", "B", "G", "B"))

print(swipr(inpt_datf=datf, how_to=c("G", "S", "B")))
```

	col1	col2
1	Af	B
2	Al	G
3	Al	S
4	Al	B
5	Arg	G
6	Arg	S
7	Arg	B
8	Arm	G
9	Arm	B
10	Al	B

unique_datf	<i>unique_datf</i>
-------------	--------------------

Description

Returns the input dataframe with the unique columns or rows.

Usage

```
unique_datf(inpt_datf, col = FALSE)
```

Arguments

inpt_datf	is the input dataframe
col	is a parameter that specifies if the dataframe returned should have unique columns or rows, defaults to F, so the dataframe returned by default has unique rows

Examples

```
datf1 <- data.frame(c(1, 2, 1, 3), c("a", "z", "a", "p"))

print(unique_datf(inpt_datf=datf1))

#   c.1..2..1..3. c..a....z....a....p..
#1           1           a
#2           2           z
#4           3           p

datf1 <- data.frame(c(1, 2, 1, 3), c("a", "z", "a", "p"), c(1, 2, 1, 3))

print(unique_datf(inpt_datf=datf1, col=TRUE))

#   cur_v cur_v
#1      1     a
#2      2     z
#3      1     a
#4      3     p
```

val_replacer	<i>val_replacer</i>
--------------	---------------------

Description

Allow to replace value from dataframe to another one.

Usage

```
val_replacer(datf, val_replaced, val_replacor = TRUE)
```

Arguments

datf is the input dataframe
val_replaced is a vector of the value(s) to be replaced
val_replacor is the value that will replace val_replaced

Examples

```
print(val_replacer(datf=data.frame(c(1, "oo4", TRUE, FALSE), c(TRUE, FALSE, TRUE, TRUE)),
  val_replaced=c(TRUE), val_replacor="NA"))

# c.1...oo4...T..F. c.T..F..T..T.
#1          1          NA
#2          oo4        FALSE
#3          NA          NA
#4        FALSE          NA
```

vec_in_datf	vec_in_datf
-------------	-------------

Description

Allow to get if a vector is in a dataframe. Returns the row and column of the vector in the dataframe if the vector is contained in the dataframe.

Usage

```
vec_in_datf(
  inpt_datf,
  inpt_vec = c(),
  coeff = 0,
  stop_untl = 1,
  conventional = FALSE
)
```

Arguments

inpt_datf is the input dataframe
inpt_vec is the vector that may be in the input dataframe
coeff is the "slope coefficient" of inpt_vec
stop_untl is the maximum number of the input vector the function returns, if in the dataframe
conventional is if a positive slope coefficient means that the vector goes upward or downward

Examples

```
datf1 <- data.frame(c(1:5), c(5:1), c("a", "z", "z", "z", "a"))

print(datf1)

# c.1.5. c.5.1. c..a....z....z....z....a..
```

```

#1      1      5      a
#2      2      4      z
#3      3      3      z
#4      4      2      z
#5      5      1      a

print(vec_in_datf(inpt_datf=datf1, inpt_vec=c(5, 4, "z"), coeff=1))

#NULL

print(vec_in_datf(inpt_datf=datf1, inpt_vec=c(5, 2, "z"), coeff=1))

#[1] 5 1

print(vec_in_datf(inpt_datf=datf1, inpt_vec=c(3, "z"), coeff=1))

#[1] 3 2

print(vec_in_datf(inpt_datf=datf1, inpt_vec=c(4, "z"), coeff=-1))

#[1] 2 2

print(vec_in_datf(inpt_datf=datf1, inpt_vec=c(2, 3, "z"), coeff=-1))

#[1] 2 1

print(vec_in_datf(inpt_datf=datf1, inpt_vec=c(5, 2, "z"), coeff=-1, conventional=TRUE))

#[1] 5 1

datf1[4, 2] <- 1

print(vec_in_datf(inpt_datf=datf1, inpt_vec=c(1, "z"), coeff=-1, conventional=TRUE, stop_

#[1] 4 2 5 2

```

vlookup_datf

*vlookup_datf***Description**

Allow to perform a vlookup on a dataframe

Usage

```
vlookup_datf(datf, v_id, col_id = 1, included_col_id = "yes")
```

Arguments

`datf` is the input dataframe
`v_id` is a vector containing the ids
`col_id` is the column that contains the ids (default is equal to 1)
`included_col_id` is if the result should return the `col_id` (default set to yes)

Examples

```
datf1 <- data.frame(c("az1", "az3", "az4", "az2"), c(1:4), c(4:1))

print(vlookup_datf(datf=datf1, v_id=c("az1", "az2", "az3", "az4")))

#   c..az1....az3....az4....az2.. c.1.4. c.4.1.
#2                                az1      1      4
#4                                az2      4      1
#21                               az3      2      3
#3                                az4      3      2
```

wider_datf	<i>wider_datf</i>
------------	-------------------

Description

Takes a dataframe as an input and the column to split according to a separator.

Usage

```
wider_datf(inpt_datf, col_to_splt = c(), sep_ = "-")
```

Arguments

`inpt_datf` is the input dataframe
`col_to_splt` is a vector containing the number or the colnames of the columns to split according to a separator
`sep_` is the separator of the elements to split to new columns in the input dataframe

Examples

```
datf1 <- data.frame(c(1:5), c("o-y", "hj-yy", "er-y", "k-ll", "ooo-mm"), c(5:1))

datf2 <- data.frame("col1"=c(1:5), "col2"=c("o-y", "hj-yy", "er-y", "k-ll", "ooo-mm"))

print(wider_datf(inpt_datf=datf1, col_to_splt=c(2), sep_="-"))

#      pre_datf X.o.  X.y.
#o-y    1      "o"   "y"   5
#hj-yy  2      "hj"  "yy"  4
#er-y   3      "er"   "y"   3
#k-ll   4      "k"   "ll"  2
#ooo-mm 5      "ooo" "mm"  1

print(wider_datf(inpt_datf=datf2, col_to_splt=c("col2"), sep_="-"))

#      pre_datf X.o.  X.y.
#o-y    1      "o"   "y"
#hj-yy  2      "hj"  "yy"
#er-y   3      "er"   "y"
#k-ll   4      "k"   "ll"
#ooo-mm 5      "ooo" "mm"
```


Index

colins_datf, [2](#)
cut_v, [3](#)

diff_datf, [3](#)

groupr_datf, [4](#)

id_keepr, [5](#)
insert_datf, [6](#)
intersect_mod, [7](#)

nestr_datf1, [8](#)
nestr_datf2, [9](#)

paste_datf, [10](#)

see_datf, [10](#)
swipr, [12](#)

unique_datf, [13](#)

val_replacer, [13](#)
vec_in_datf, [14](#)
vlookup_datf, [15](#)

wider_datf, [16](#)