Package 'ncodeR'

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Title Techniques for Automated Classifiers

Type Package

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Description A set of techniques that can be used to develop, validate, and implement automated classifiers. A powerful tool for transforming raw data into meaningful information, 'ncodeR' (Shaffer, D. W. (2017) Quantitative Ethnography. ISBN: 0578191687) is designed specifically for working with big data: large document collections, logfiles, and other text data.

LazyData TRUE

BugReports https://gitlab.com/epistemic-analytics/qe-packages/ncoder/issues

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`as.data.frame.Code` *Title*

Description

Title

Usage

```
## S3 method for class 'Code'
as.data.frame(x, row.names = NULL, optional = FALSE,
  ...)
```

Arguments

`x`	Code object to convert
`row.names`	NULL or a character vector giving the row names for the data frame. Missing values are not allowed.
`optional`	logical. If TRUE, setting row names and converting column names
`...`	additional arguments to be passed to or from methods

Value

data.frame

Examples

```
data(RS.data)
rs = RS.data
newcode = create.code(name = "Data", expressions = c("number","data"), excerpts = rs$text)
as.data.frame(newcode)
```

`as.data.frame.CodeSet` *Title*

Description

Title

Usage

```
## S3 method for class 'CodeSet'
as.data.frame(x, row.names = NULL, optional = FALSE,
  ...)
```

Arguments

`x`	CodeSet to convert
`row.names`	NULL or a character vector giving the row names for the data frame. Missing values are not allowed.
`optional`	logical. If TRUE, setting row names and converting column names
`...`	additional arguments to be passed to or from methods

Value

data.frame

Examples

```
data(RS.data)
rs = RS.data
newcode = create.code(name = "Data", expressions = c("number","data"),
    excerpts = rs$text)
code.set = code.set("Demo RS CodeSet", "CodeSet made for the demo",
    excerpts = rs$text, codes = c(newcode))
as.data.frame(code.set)
```

autocode *Match a list of expressions against some set of excerpts*

Description

Autocodes all codes provided, either directly with code or as part of a provided codeset

Usage

```
autocode(x = NULL, expressions = NULL, excerpts = NULL,
  simplify = T, mode = "all")
```

Arguments

x	Object to autocode. Either a Code or CodeSet
expressions	Expressions to use for coding (optional)
excerpts	Excerpts to code
simplify	If TRUE, returns a data.frame, else returns a Code or CodeSet object
mode	Either all, training, or test representing the set of excerpts that should be recoded in the computerSet

Value

data.frame of is simplify = T (default), otherwise the Code or CodeSet object with updated computerSets

code.set *Create CodeSet*

Description

Create a new CodeSet object

Usage

```
code.set(title = "", description = "", excerpts = c(), codes = c())
```

Arguments

title	Title for the CodeSet
description	Description of the CodeSet
excerpts	Set of excerpts to use with the CodeSet
codes	Set of codes to attach to the CodeSet

Value

CodeSet object

Examples

```
data(RS.data)
rs = RS.data
code.set = code.set("Demo RS CodeSet", "CodeSet made for the demo", excerpts = rs$text, codes = c())
```

`CodeSet` *CodeSet*

Description

Object representing a set of codes

Usage

```
CodeSet
```

Format

An object of class `R6ClassGenerator` of length 24.

Value

CodeSet object

CodeSet

Fields

`title` Title of the CodeSet

`description` String description of the set of codes to be included

`excerpts` Character vector of text excerpts to code (optional)

`expressions` Codes to include in the CodeSet (optional)

Examples

```
data(RS.data)
rs = RS.data
code.set = code.set("Demo RS CodeSet", "CodeSet made for the demo", excerpts = rs$text, codes = c())
```

create.code *Create a code*

Description

Create a code

Usage

```
create.code(name = "NewCode", definition = NULL, excerpts = NULL,
  type = "Regex", ...)
```

Arguments

name	Name of the code
definition	Definition of the Code
excerpts	Character vectore of excerpts to use for Coding
type	Character string representing the type of code (Default: "Regex")
...	Additional parameters

Value

Code object

Examples

```
data(RS.data)
rs = RS.data

# Generate a Code
newcode = create.code(name = "Data", expressions = c("number","data"), excerpts = rs$text)
```

differences *Find Differences*

Description

Find rows that differ within a data.frame or two vectors

Usage

```
differences(code = NULL, wh = "trainingSet", to = "computerSet")
```

Arguments

code	Code object to search for differences
wh	Set to use as the base comparison
to	Set to compare wh to

Details

Find rows that differ within a data.frame or two vectors

Value

logical vector representing indices that are coded differently

vector of indices representing differences

---

expression.match *Expression Matching*

Description

Match a set of text excerpts against a set of regular expressions

Usage

```
expression.match(excerpts, expressions, names = list(NULL, "V1"))
```

Arguments

excerpts	Character vector to match against
expressions	Character vector of expressions
names	Character vector to use for dimension names

Value

Matrix representing matched expressions

getHandSetIndices *Handset indices*

Description

Handset indices

Usage

```
getHandSetIndices(codeToUse, handSetLength = 20, handSetBaserate = 0.2,
  unseen = F)
```

Arguments

codeToUse	[TBD]
handSetLength	[TBD]
handSetBaserate	[TBD]
unseen	[TBD]

getHandSetIndices2 *Get indices to code*

Description

Get indices to code

Usage

```
getHandSetIndices2(code, handSetLength = 20, handSetBaserate = 0.2,
  unseen = F, this.set = NULL)
```

Arguments

code	Code object
handSetLength	Number of excerpts to put into the test set
handSetBaserate	Minimum number of positives that should be in the test set
unseen	[TBD]
this.set	[TBD]

Value

Code object with an updated test set and computer set

handcode *Handcode excerpts*

Description

Handcode a set of excerpts using a vector of expressions

Usage

```
handcode(code = NULL, excerpts = NULL, expressions = NULL,
  n = ifelse(is.null(this.set), 10, length(this.set)), baserate = 0.2,
  unseen = F, this.set = NULL, results = NULL)
```

Arguments

code	Code object to handcode
excerpts	Excerpts to code (optional)
expressions	Expressions to code with (options)
n	Number of excerpts to handcode
baserate	Value between 0 and 1, inflates the baserate chosen excerpts to code, ensuring the number of positive at least equal to n * baserate
unseen	Logical or number Indicating additional excerpts with unseen words should be added. If TRUE (default), two words added or by ‘number‘
this.set	[TBD]
results	[TBD]

Details

Handcode a set of excerpts using a vector of expressions

Value

Code

---

ncode *Wrapper for the entire coding process*

Description

Wrapper for the entire coding process

Usage

```
ncode()
```

ncodeR *ncodeR for qualitative coding*

Description

ncodeR is used for generating codes and coding datasets

old_test *Calculate statistics*

Description

Run tests (kappa, rho) on the given Code

Usage

```
old_test(code, kappaThreshold = 0.65, baserateInflation = 0.2,
  type = c("training", "test"))
```

Arguments

code	Code object to test
kappaThreshold	Threshold used for calculating rhoR::rho
baserateInflation	inflation rate to use when sampling handsets
type	vector indicating which stats should be calculated

Value

Code object with updated statistics property

print.summary.Code *Print a Code summary*

Description

Print a Code summary

Usage

```
## S3 method for class 'summary.Code'
print(x, ...)
```

Arguments

x	list from summary()
...	Additional parameters

Value

Prints code summary

Examples

```
data(RS.data)
rs = RS.data
newcode = create.code(name = "Data",
    expressions = c("number","data"), excerpts = rs$text)
summary(newcode)
```

---

print.summary.CodeSet *Print the summary of a CodeSet*

Description

Print the summary of a CodeSet

Usage

```
## S3 method for class 'summary.CodeSet'
print(x, ...)
```

Arguments

x	Summary of a CodeSet
...	Additional parameters

Value

prints summary

Examples

```
data(RS.data)
rs = RS.data

newcode = create.code(name = "Data",
    expressions = c("number","data"), excerpts = rs$text)
code.set = code.set("Demo RS CodeSet", "CodeSet made for the demo",
    excerpts = rs$text, codes = c(newcode))
summary(code.set)
```

print.summary.TestList *Print a TestList summary*

Description

Print a TestList summary

Usage

```
## S3 method for class 'summary.TestList'
print(x, ...)
```

Arguments

x	list from summary()
...	Additional parameters

Value

prints summary

Examples

```
data(RS.data)
rs = RS.data
newcode <- create.code("Data", expressions = c("number","data"), excerpts = rs$text)
newcode <- handcode(newcode, this.set = 10:15, results = 0)
newcode = test(code = newcode, kappa_threshold = 0.65)
summary(newcode$statistics)
```

RegexCode *RegexCode*

Description

Creates an object for Regular Expression coding. No need to call this directly, create.code is a nice wrapper around this and any other types of Codes

Usage

```
RegexCode
```

Format

An object of class `R6ClassGenerator` of length 24.

Value

RegexCode object

Fields

`name` Name of the Code

`definition` Definition of the Code

`excerpts` Character vector of text excerpts to code

`...` Additional parameters not specific to a RegexCode

`expressions` Character vector of regular expressions

Examples

```
data(RS.data)
rs = RS.data

# Generate a Code
newcode = RegexCode$new(name = "New Code", definition = "Some definition",
    excerpts = rs$text, expressions = c("number","data"))
```

`resolve` *Resolve differences*

Description

Resolve differing results

Usage

```
resolve(code = NULL, trainingSet = NULL, computerSet = NULL,
  expressions = NULL, excerpts = NULL, ignored = NULL)
```

Arguments

`code`	Code to resolve coding differences
`trainingSet`	Optionally provide a trainingSet, default: code$trainingSet
`computerSet`	Optionally provide a computerSet, default: code$computerSet
`expressions`	Optionally provide a set of expressions, default: code$expressions
`excerpts`	Optionally provide a set of excerpts, default: code$excerpts
`ignored`	Optionally proivde a set of excerpts to ignore during the resolve cycle loop

RS.data *Rescushell Chat Data*

Description

A dataset containing sample chat data from the Rescushell Virtual Internship

Usage

```
RS.data
```

Format

An object of class `data.frame` with 3824 rows and 20 columns.

summary.Code *Obtain summary of a Code object*

Description

Obtain summary of a Code object

Usage

```
## S3 method for class 'Code'
summary(object, ...)
```

Arguments

`object`	Code to summarize
`...`	Additional parameters

Value

List of Code summary

Examples

```
data(RS.data)
rs = RS.data
newcode = create.code(name = "Data",
    expressions = c("number","data"), excerpts = rs$text)
summary(newcode)
```

summary.CodeSet *Obtain a summary of the CodeSet*

Description

Obtain a summary of the CodeSet

Usage

```
## S3 method for class 'CodeSet'
summary(object, ...)
```

Arguments

object	CodeSet object
...	Additional parameters

Value

list containing description and Code summaries

Examples

```
data(RS.data)
rs = RS.data

newcode = create.code(name = "Data",
    expressions = c("number","data"), excerpts = rs$text)
code.set = code.set("Demo RS CodeSet", "CodeSet made for the demo",
    excerpts = rs$text, codes = c(newcode))
summary(code.set)
```

summary.TestList *Obtain a summary of a Code's test results*

Description

Obtain a summary of a Code's test results

Usage

```
## S3 method for class 'TestList'
summary(object, ...)
```

Arguments

object	TestList object of Code
...	Additional parameters

Value

list of Test summary

Examples

```
data(RS.data)
rs = RS.data
newcode = create.code(name = "Data",
    expressions = c("number","data"), excerpts = rs$text)
newcode <- handcode(newcode, this.set = 10:15, results = 0)
newcode = test(code = newcode, kappa_threshold = 0.65)
summary(newcode$statistics)
```

---

test *Title*

Description

Title

Usage

```
test(code, kappa_threshold = 0.65, baserate_inflation = 0.2, ...)
```

Arguments

code	[TBD]
kappa_threshold	[TBD]
baserate_inflation	[TBD]
...	[TBD]

Value

code object

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