Package ‘salty’

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Type Package
Title Turn Clean Data into Messy Data
Version 0.1.0
Description Take real or simulated data and salt it with errors commonly found in the wild, such as pseudo-OCR errors, Unicode problems, numeric fields with nonsensical punctuation, bad dates, etc.
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R topics documented:

   inspect_shaker .................................................. 2
   p_indices ....................................................... 2
   salt ........................................................... 3
   salty .......................................................... 4
   salt_delete ..................................................... 5
   salt_insert ..................................................... 5
p_indices

salt_na 6
salt_replace 7
salt_substitute 8
salt_swap 8
shaker 9

Index

inspect_shaker

Access the original source vector for a given shaker function

Description

Access the original source vector for a given shaker function

Usage

inspect_shaker(f)

Arguments

f A shaker function

Value

A character vector

Examples

inspect_shaker(shaker$punctuation)

p_indices

Sample a proportion of indices of a vector

Description

Sample a proportion of indices of a vector

Usage

p_indices(x, p)

Arguments

x A vector
p A numeric probability between 0 and 1
**Value**

An integer vector of indices.

---

**Description**

These are easy-to-use wrapper functions that call either `salt_insert` (for including new characters) or `salt_replace` (for salting that requires replacement of specific characters) with sane defaults.

**Usage**

- `salt_punctuation(x, p = 0.2, n = 1)`
- `salt_letters(x, p = 0.2, n = 1)`
- `salt_whitespace(x, p = 0.2, n = 1)`
- `salt_digits(x, p = 0.2, n = 1)`
- `salt_ocr(x, p = 0.2, rep_p = 0.1)`
- `salt_capitalization(x, p = 0.1, rep_p = 0.1)`
- `salt_decimal_commas(x, p = 0.1, rep_p = 0.1)`

**Arguments**

- **x** A vector. This will always be coerced to character during salting.
- **p** A number between 0 and 1. Percent of values in `x` that should be salted.
- **n** A positive integer. Number of times to add new values from `insertions` into selected values in `x` manually supply your own list of characters.
- **rep_p** A number between 0 and 1. Probability that a given match should be replaced in one of the selected values.

**Details**

For a more fine-grained control over how characters are added and whether, see the documentation for `salt_insert`, `salt_substitute`, `salt_replace`, and `salt_delete`. 
Functions

• `salt_punctuation`: Punctuation characters
• `salt_letters`: Upper- and lower-case letters
• `salt_whitespace`: Spaces
• `salt_digits`: 0-9
• `salt_ocr`: Replace some substrings with common OCR problems
• `salt_capitalization`: Flip capitalization of letters
• `salt_decimal_commas`: Flip decimals to commas and vice versa

Description

Insert, delete, replace, and substitute bits of your data with messy values.

Details

Convenient wrappers such as `salt_punctuation` are provided for quick access to this package’s functionality with simple defaults. For more fine-grained control, use one of the underlying `salt_` functions:

• `salt_insert` will insert new characters into some of the values of `x`. All the original characters of the original values will be maintained.
• `salt_substitute` will substitute some characters in some of the values of `x` in place of some of the original characters.
• `salt_replace` will replace some characters in some of the values of `x`. Unlike `salt_substitute`, `salt_replace` does conditional replacement dependent on the original values of `x`, such as changing capitalization or simulating OCR errors based on certain character combinations.
• `salt_delete` will remove some characters in the values of `x`
• `salt_na` and `salt_empty` will replace some values of `x` with `NA` or with empty strings.
• `salt_swap` replaces entire values of `x` with new strings
**salt_delete**  
*Delete some characters from some values*

**Description**
Delete some characters from some values

**Usage**
```r
salt_delete(x, p = 0.2, n = 1)
```

**Arguments**
- **x**: A vector. This will always be coerced to character during salting.
- **p**: A number between 0 and 1. Percent of values in `x` that should be salted.
- **n**: A positive integer. Number of times to add new values from `insertions` into selected values in `x` manually supply your own list of characters.

**Value**
A character vector the same length as `x`

**Examples**
```r
x <- c("Lorem ipsum dolor sit amet, consectetur adipiscing elit.",
       "Nunc finibus tortor a elit eleifend interdum.",
       "Maecenas aliquam augue sit amet ultricies placerat.")
salt_delete(x, p = 0.5, n = 5)
salt_empty(x, p = 0.5)
salt_na(x, p = 0.5)
```

---

**salt_insert**  
*Insert new characters into some values in a vector*

**Description**
Inserts a selection of characters into a percentage of values in the supplied vector.

**Usage**
```r
salt_insert(x, insertions, p = 0.2, n = 1)
```
Arguments

- **x**: A vector. This will always be coerced to character during salting.
- **insertions**: A shaker function, or a character vector.
- **p**: A number between 0 and 1. Percent of values in x that should be salted.
- **n**: A positive integer. Number of times to add new values from insertions into selected values in x manually supply your own list of characters.

Value

A character vector the same length as x

---

**salt_na**

*Remove entire values from a vector*

Description

Remove entire values from a vector

Usage

```r
salt_na(x, p = 0.2)
salt_empty(x, p = 0.2)
```

Arguments

- **x**: A vector
- **p**: A number between 0 and 1. Proportion of values to edit.

Value

A vector the same length as x
**salt_replace**

*Replace certain patterns into some values in a vector*

**Description**

Inserts a selection of characters into some values of x. Pair `salt_replace` with the named vectors in `replacement_shaker`, or supply your own named vector of replacements. The convenience functions `saltocr` and `salt_capitalization` are light wrappers around `salt_replace`.

**Usage**

```r
salt_replace(x, replacements, p = 0.1, rep_p = 0.5)
```

**Arguments**

- **x**: A vector. This will always be coerced to character during salting.
- **replacements**: A `replacement_shaker` function, or a named character vector of patterns and replacements.
- **p**: A number between 0 and 1. Percent of values in x that should be salted.
- **rep_p**: A number between 0 and 1. Probability that a given match should be replaced in one of the selected values.

**Value**

A character vector the same length as x

**Examples**

```r
x <- c("Lorem ipsum dolor sit amet, consectetur adipiscing elit.",
  "Nunc finibus tortor a elit eleifend interdum.",
  "Maecenas aliquam augue sit amet ultricies placerat.")

salt_replace(x, replacement_shaker$capitalization, p = 0.5, rep_p = 0.2)

saltocr(x, p = 1, rep_p = 0.5)
```
salt_substitute | Substitute certain characters in a vector

Description

Substitute certain characters in a vector

Usage

\[
salt\_substitute(x, \text{substitutions}, p = 0.2, n = 1)
\]

Arguments

- **x**: A vector. This will always be coerced to character during salting.
- **substitutions**: Values to be substituted in
- **p**: A number between 0 and 1. Percent of values in x that should be salted.
- **n**: A positive integer. Number of times to add new values from insertions into selected values in x manually supply your own list of characters.

Value

A character vector the same length as x

Examples

```r
x <- c("Lorem ipsum dolor sit amet, consectetur adipiscing elit.",
    "Nunc finibus tortor a elit eleifend interdum.",
    "Maecenas aliquam augue sit amet ultrices placerat.")

salt\_substitute(x, shaker\$digits, p = 0.5, n = 5)
```

salt_swap | Randomly swap out entire values in a vector

Description

Because swaps can be provided by either a character vector or a function that returns a character vector, salt_swap can be fruitfully used in conjunction with the charlatan:charlatan package to intersperse real data with simulated data.

Usage

\[
salt\_swap(x, \text{swaps}, p = 0.2)
\]
Arguments

- **x**: A vector. This will always be coerced to character during salting.
- **swaps**: Values to be swapped out
- **p**: A number between 0 and 1. Percent of values in x that should be salted.

Value

A character vector the same length as x

Examples

```r
x <- c("Lorem ipsum dolor sit amet, consectetur adipiscing elit.",
       "Nunc finibus tortor a elit eleifend interdum.",
       "Maecenas aliquam augue sit amet ultricies placerat.")
new_values <- c("foo", "bar", "baz")
salt_swap(x, swaps = new_values, p = 0.5)
```

Description

**shaker** contains various character sets to be added to your data using `salt_insert` and `salt_substitute`. **replacement_shaker** is for `salt_replace`, and contains pairlists that replace matched patterns in your data.

Usage

- `shaker`
- `replacement_shaker`
- `available_shakers()`

Format

An object of class `list` of length 6.

Value

A sampling function that will be called by `salt_insert`, `salt_substitute`, or `salt_replace`.

Examples

```r
salt_insert(letters, shaker$punctuation)
available_shakers()"
Index

*Topic datasets
  shaker, 9

available_shakers (shaker), 9
charlatan::charlatan, 8
inspect_shaker, 2
p_indices, 2
replacement_shaker, 7, 9
replacement_shaker (shaker), 9
salt, 3
salt_capitalization, 7
salt_capitalization (salt), 3
salt_decimal_commas (salt), 3
salt_delete, 3, 4, 5
salt_digits (salt), 3
salt_empty, 4
salt_empty (salt_na), 6
salt_insert, 3, 4, 5, 9
salt_letters (salt), 3
salt_na, 4, 6
salt_ocr, 7
salt_ocr (salt), 3
salt_punctuation, 4
salt_punctuation (salt), 3
salt_replace, 3, 4, 7, 7, 9
salt_substitute, 3, 4, 8, 9
salt_swap, 4, 8
salt_whitespace (salt), 3
salty, 4
salty-package (salty), 4
shaker, 2, 6, 9, 9