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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Depends R (>= 2.10)

Imports assertthat, purrr, stringr

Suggests charlatan, testthat (>= 2.0.0), tibble, covr

Encoding UTF-8

LazyData true

RoxygenNote 6.1.0

URL https://github.com/mdlincoln/salty

BugReports https://github.com/mdlincoln/salty/issues

NeedsCompilation no

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R topics documented:

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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.

---

salt   *Salt vectors with common data problems*

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

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salty   *salty: Turn Clean Data Into Messy Data*

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

```
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

```
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

```
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

```
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
salt_ocr and salt_capitalization are light wrappers around salt_replace.

Usage

```
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

```
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)

salt_ocr(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, 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

```
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_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, 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

```
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)
```

---

shaker   *Get a set of values to use in* salt_*functions*

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

```
salt_insert(letters, shaker$punctuation)
available_shakers()
```

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