Package ‘tidytext’

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| bind_tf_idf | Bind the term frequency and inverse document frequency of a tidy text dataset to the dataset |

**Description**

Calculate and bind the term frequency and inverse document frequency of a tidy text dataset, along with the product, tf-idf, to the dataset. Each of these values are added as columns. This function supports non-standard evaluation through the tidyeval framework.

**Usage**

`bind_tf_idf(tbl, term, document, n)`
**cast_sparse**

Create a sparse matrix from row names, column names, and values in a table.

**Description**

This function supports non-standard evaluation through the tidyeval framework.

**Usage**

```r
cast_sparse(data, row, column, value, ...)
```
Arguments

data A tbl
row Column name to use as row names in sparse matrix, as string or symbol
column Column name to use as column names in sparse matrix, as string or symbol
value Column name to use as sparse matrix values (default 1) as string or symbol
... Extra arguments to pass on to sparseMatrix

Details

Note that cast_sparse ignores groups in a grouped tbl_df. The arguments row, column, and value are passed by expression and support quasiquotation; you can unquote strings and symbols.

Value

A sparse Matrix object, with one row for each unique value in the row column, one column for each unique value in the column column, and with as many non-zero values as there are rows in data.

Examples

dat <- data.frame(a = c("row1", "row1", "row2", "row2", "row2"),
    b = c("col1", "col2", "col1", "col3", "col4"),
    val = 1:5)
cast_sparse(dat, a, b)
cast_sparse(dat, a, b, val)

cast_tdm

Casting a data frame to a DocumentTermMatrix, TermDocumentMatrix, or dfm

Description

This turns a "tidy" one-term-per-document-per-row data frame into a DocumentTermMatrix or TermDocumentMatrix from the tm package, or a dfm from the quanteda package. These functions support non-standard evaluation through the tidyeval framework. Groups are ignored.

Usage

cast_tdm(data, term, document, value, weighting = tm::weightTf, ...)
cast_dtm(data, document, term, value, weighting = tm::weightTf, ...)
cast_dfm(data, document, term, value, ...)
Arguments

data | Table with one-term-per-document-per-row
term | Column containing terms as string or symbol
document | Column containing document IDs as string or symbol
value | Column containing values as string or symbol
weighting | The weighting function for the DTM/TDM (default is term-frequency, effectively unweighted)
... | Extra arguments passed on to \texttt{sparseMatrix}

Details

The arguments \texttt{term}, \texttt{document}, and \texttt{value} are passed by expression and support \texttt{quasiquotation}; you can unquote strings and symbols.

Description

Tidy a corpus object from the quanteda package. \texttt{tidy} returns a tbl\_df with one-row-per-document, with a \texttt{text} column containing the document’s text, and one column for each document-level metadata. \texttt{glance} returns a one-row tbl\_df with corpus-level metadata, such as source and created. For Corpus objects from the tm package, see \texttt{tidy.Corpus}.

Usage

```r
## S3 method for class 'corpus'
tidy(x, ...)

## S3 method for class 'corpus'
glance(x, ...)
```

Arguments

\(x\) | A Corpus object, such as a VCorpus or PCorpus
\(...\) | Extra arguments, not used

Details

For the most part, the \texttt{tidy} output is equivalent to the "documents" data frame in the corpus object, except that it is converted to a tbl\_df, and \texttt{texts} column is renamed to \texttt{text} to be consistent with other uses in tidytext.

Similarly, the \texttt{glance} output is simply the "metadata" object, with NULL fields removed and turned into a one-row tbl\_df.
Examples

```r
if (requireNamespace("quanteda", quietly = TRUE)) {
  data("data_corpus_inaugural", package = "quanteda")

  data_corpus_inaugural

  tidy(data_corpus_inaugural)
}
```

---

**dictionary_tidiers**  
_Tidy dictionary objects from the quanteda package_

**Description**

Tidy dictionary objects from the quanteda package

**Usage**

```r
## S3 method for class 'dictionary2'
tidy(x, regex = FALSE, ...)
```

**Arguments**

- `x` A dictionary object
- `regex` Whether to turn dictionary items from a glob to a regex
- `...` Extra arguments, not used

**Value**

A data frame with two columns: category and word.

---

**get_sentiments**  
_Get a tidy data frame of a single sentiment lexicon_

**Description**

Get specific sentiment lexicons in a tidy format, with one row per word, in a form that can be joined with a one-word-per-row dataset. The "bing" option comes from the included `sentiments` data frame, and others call the relevant function in the `textdata` package.

**Usage**

```r
get_sentiments(lexicon = c("bing", "afinn", "loughran", "nrc"))
```
get_stopwords

Arguments

lexicon          The sentiment lexicon to retrieve; either "afinn", "bing", "nrc", or "loughran"

Value

A tbl_df with a word column, and either a sentiment column (if lexicon is not "afinn") or a numeric score column (if lexicon is "afinn").

Examples

library(dplyr)

get_sentiments("bing")

## Not run:
get_sentiments("afinn")
geet_sentiments("nrc")

## End(Not run)

get_stopwords  Get a tidy data frame of a single stopword lexicon

Description

Get a specific stop word lexicon via the stopwords package’s stopwords function, in a tidy format with one word per row.

Usage

get_stopwords(language = "en", source = "snowball")

Arguments

language         The language of the stopword lexicon specified as a two-letter ISO code, such as "es", "de", or "fr". Default is "en" for English. Use stopwords_getlanguages from stopwords to see available languages.

source           The source of the stopword lexicon specified. Default is "snowball". Use stopwords_getsources from stopwords to see available sources.

Value

A tibble with two columns, word and lexicon. The parameter lexicon is "quantda" in this case.
Examples

library(dplyr)
get_stopwords()
get_stopwords(source = "smart")
get_stopwords("es", "snowball")
get_stopwords("ru", "snowball")

---

**lda_tidiers**

*Tidiers for LDA and CTM objects from the topicmodels package*

Description

Tidy the results of a Latent Dirichlet Allocation or Correlated Topic Model.

Usage

```r
## S3 method for class 'LDA'
tidy(x, matrix = c("beta", "gamma"), log = FALSE, ...)

## S3 method for class 'CTM'
tidy(x, matrix = c("beta", "gamma"), log = FALSE, ...)

## S3 method for class 'LDA'
augment(x, data, ...)

## S3 method for class 'CTM'
augment(x, data, ...)

## S3 method for class 'LDA'
glance(x, ...)

## S3 method for class 'CTM'
glance(x, ...)
```

Arguments

- **x** An LDA or CTM (or LDA_VEM/CTA_VEM) object from the topicmodels package
- **matrix** Whether to tidy the beta (per-term-per-topic, default) or gamma (per-document-per-topic) matrix
- **log** Whether beta/gamma should be on a log scale, default FALSE
- **...** Extra arguments, not used
- **data** For augment, the data given to the LDA or CTM function, either as a DocumentTermMatrix or as a tidied table with "document" and "term" columns
**Value**

*tidy* returns a tidied version of either the beta or gamma matrix.

If `matrix == "beta"` (default), returns a table with one row per topic and term, with columns

- **topic**: Topic, as an integer
- **term**: Term
- **beta**: Probability of a term generated from a topic according to the multinomial model

If `matrix == "gamma"`, returns a table with one row per topic and document, with columns

- **topic**: Topic, as an integer
- **document**: Document name or ID
- **gamma**: Probability of topic given document

*augment* returns a table with one row per original document-term pair, such as is returned by `tdm_tidiers`:

- **document**: Name of document (if present), or index
- **term**: Term
- **.topic**: Topic assignment

If the `data` argument is provided, any columns in the original data are included, combined based on the `document` and `term` columns.

*glance* always returns a one-row table, with columns

- **iter**: Number of iterations used
- **terms**: Number of terms in the model
- **alpha**: If an LDA_VEM, the parameter of the Dirichlet distribution for topics over documents

**Examples**

```r
if (requireNamespace("topicmodels", quietly = TRUE)) {
  set.seed(2016)
  library(dplyr)
  library(topicmodels)
  data("AssociatedPress", package = "topicmodels")
  ap <- AssociatedPress[1:100, ]
  lda <- LDA(ap, control = list(alpha = 0.1), k = 4)

  # get term distribution within each topic
  td_lda <- tidy(lda)
  td_lda

  library(ggplot2)

  # visualize the top terms within each topic
  td_lda_filtered <- td_lda %>%
```
```r
# filter beta values over .004 and reorder
filter(beta > .004) %>%
  mutate(term = reorder(term, beta))

ggplot(td_lda_filtered, aes(term, beta)) +
  geom_bar(stat = "identity") +
  facet_wrap(~ topic, scales = "free") +
  theme(axis.text.x = element_text(angle = 90, size = 15))

# get classification of each document

# which were we most uncertain about?
```

---

**Description**

Tidy LDA models fit by the mallet package, which wraps the Mallet topic modeling package in Java. The arguments and return values are similar to `lda_tidiers`.

**Usage**

```r
## S3 method for class 'jobRef'
tidy(x,
  matrix = c("beta", "gamma"),
  log = FALSE,
  normalized = TRUE,
  smoothed = TRUE,
  ...
)
```

```r
## S3 method for class 'jobRef'
augment(x, data, ...)
```
Arguments

- **x**: A jobjRef object, of type RTopicModel, such as created by `MalletLDA`.
- **matrix**: Whether to tidy the beta (per-term-per-topic, default) or gamma (per-document-per-topic) matrix.
- **log**: Whether beta/gamma should be on a log scale, default FALSE.
- **normalized**: If true (default), normalize so that each document or word sums to one across the topics. If false, values will be integers representing the actual number of word-topic or document-topic assignments.
- **smoothed**: If true (default), add the smoothing parameter to each to avoid any values being zero. This smoothing parameter is initialized as alpha.sum in `MalletLDA`.
- **...**: Extra arguments, not used
- **data**: For `augment`, the data given to the LDA function, either as a DocumentTermMatrix or as a tidied table with "document" and "term" columns.

Details

Note that the LDA models from `MalletLDA` are technically a special case of S4 objects with class `jobjRef`. These are thus implemented as `jobjRef` tidiers, with a check for whether the toString output is as expected.

Value

`augment` must be provided a data argument containing one row per original document-term pair, such as is returned by `tdm_tidiers`, containing columns `document` and `term`. It returns that same data with an additional column `.topic` with the topic assignment for that document-term combination.

See Also

- `lda_tidiers`, `mallet.doc.topics`, `mallet.topic.words`

Examples

```r
## Not run:
library(mallet)
library(dplyr)

data("AssociatedPress", package = "topicmodels")
td <- tidy(AssociatedPress)

# mallet needs a file with stop words
tmp <- tempfile()
writeLines(stop_words$word, tmp)

# two vectors: one with document IDs, one with text
docs <- td %>%
  group_by(document = as.character(document)) %>%
  summarize(text = paste(rep(term, count), collapse = " "))
```
docs <- mallet.import(docs$document, docs$text, tmp)

# create and run a topic model
topic_model <- MalletLDA(num.topics = 4)
topic_model$loadDocuments(docs)
topic_model$train(20)

# tidy the word-topic combinations
td_beta <- tidy(topic_model)
td_beta

# Examine the four topics
td_beta %>%
  group_by(topic) %>%
  top_n(8, beta) %>%
  ungroup() %>%
  mutate(term = reorder(term, beta)) %>%
  ggplot(aes(term, beta)) +
  geom_col() +
  facet_wrap(~ topic, scales = "free") +
  coord_flip()

# find the assignments of each word in each document
assignments <- augment(topic_model, td)
assignments

## End(Not run)

---

**nma_words**

*English negators, modals, and adverbs*

**Description**

English negators, modals, and adverbs, as a data frame. A few of these entries are two-word phrases instead of single words.

**Usage**

nma_words

**Format**

A data frame with 44 rows and 2 variables:

- **word** An English word or bigram
- **modifier** The modifier type for word, either "negator", "modal", or "adverb"
**Source**

http://saifmohammad.com/WebPages/SCL.html#NMA

---

**parts_of_speech**

*Parts of speech for English words from the Moby Project*

---

**Description**

Parts of speech for English words from the Moby Project by Grady Ward. Words with non-ASCII characters and items with a space have been removed.

**Usage**

parts_of_speech

**Format**

A data frame with 205,985 rows and 2 variables:

- **word** An English word
- **pos** The part of speech of the word. One of 13 options, such as "Noun", "Adverb", "Adjective"

**Details**

Another dataset of English parts of speech, available only for non-commercial use, is available as part of SUBTLEXus at https://www.ugent.be/pp/experimentele-psychologie/en/research/documents/subtlexus/.

**Source**

https://archive.org/details/mobypartofspeech03203gut

**Examples**

```r
library(dplyr)

parts_of_speech

parts_of_speech %>%
  count(pos, sort = TRUE)
```
**reorder_within**

**Reorder an x or y axis within facets**

**Description**

Reorder a column before plotting with faceting, such that the values are ordered within each facet. This requires two functions: `reorder_within` applied to the column, then either `scale_x_reordered` or `scale_y_reordered` added to the plot. This is implemented as a bit of a hack: it appends ___ and then the facet at the end of each string.

**Usage**

```r
reorder_within(x, by, within, fun = mean, sep = "___", ...)  
scale_x_reordered(..., sep = "___")  
scale_y_reordered(..., sep = "___")
```

**Arguments**

- **x** Vector to reorder.
- **by** Vector of the same length, to use for reordering.
- **within** Vector of the same length that will later be used for faceting.
- **fun** Function to perform within each subset to determine the resulting ordering. By default, mean.
- **sep** Separator to distinguish the two. You may want to set this manually if ___ can exist within one of your labels.
- **...** In `reorder_within` arguments passed on to `reorder`. In the scale functions, extra arguments passed on to `scale_x_discrete` or `scale_y_discrete`.

**Source**

"Ordering categories within ggplot2 Facets" by Tyler Rinker: [https://trinkerrstuff.wordpress.com/2016/12/23/ordering-categories-within-ggplot2-facets/](https://trinkerrstuff.wordpress.com/2016/12/23/ordering-categories-within-ggplot2-facets/)

**Examples**

```r
library(tidyr)
library(ggplot2)

iris_gathered <- gather(iris, metric, value, -Species)

# reordering doesn't work within each facet (see Sepal.Width):
ggplot(iris_gathered, aes(reorder(Species, value), value)) +  
  geom_boxplot() +  
  facet_wrap(~ metric)
```
# reorder_within and scale_x_reordered work.
# (Note that you need to set scales = "free_x" in the facet)
ggplot(iris_gathered, aes(reorder_within(Species, value, metric), value)) +
  geom_boxplot() +
  scale_x_reordered() +
  facet_wrap(~ metric, scales = "free_x")

---

**sentiments**

**Sentiment lexicon from Bing Liu and collaborators**

**Description**

Lexicon for opinion and sentiment analysis in a tidy data frame. This dataset is included in this package with permission of the creators, and may be used in research, commercial, etc. contexts with attribution, using either the paper or URL below.

**Usage**

sentiments

**Format**

A data frame with 6,786 rows and 2 variables:

- **word** An English word
- **sentiment** A sentiment for that word, either positive or negative.

**Details**

This lexicon was first published in:


Words with non-ASCII characters were removed.

**Source**

[https://www.cs.uic.edu/~liub/FBS/sentiment-analysis.html](https://www.cs.uic.edu/~liub/FBS/sentiment-analysis.html)
Description

Tidy topic models fit by the stm package. The arguments and return values are similar to lda_tidiers.

Usage

```r
## S3 method for class 'STM'
tidy(
x,  
matrix = c("beta", "gamma", "theta"),  
log = FALSE,  
document_names = NULL,  
...)

## S3 method for class 'estimateEffect'
tidy(x, ...)

## S3 method for class 'STM'
augment(x, data, ...)

## S3 method for class 'STM'
glance(x, ...)
```

Arguments

- `x` An STM fitted model object from either `stm` or `estimateEffect` from the stm package.
- `matrix` Whether to tidy the beta (per-term-per-topic, default) or gamma/theta (per-document-per-topic) matrix. The stm package calls this the theta matrix, but other topic modeling packages call this gamma.
- `log` Whether beta/gamma/theta should be on a log scale, default FALSE
- `document_names` Optional vector of document names for use with per-document-per-topic tidying
- `data` For `augment`, the data given to the `stm` function, either as a dfm from quanteda or as a tidied table with "document" and "term" columns
- `...` Extra arguments, not used

Value

- `tidy` returns a tidied version of either the beta or gamma matrix if called on an object from `stm` or a tidied version of the estimated regressions if called on an object from `estimateEffect`.
- `augment` must be provided a data argument, either a dfm from quanteda or a table containing one row per original document-term pair, such as is returned by `tdm_tidiers`, containing columns document
and term. It returns that same data as a table with an additional column .topic with the topic assignment for that document-term combination.

`glance` always returns a one-row table, with columns

- **k**: Number of topics in the model
- **docs**: Number of documents in the model
- **terms**: Number of terms in the model
- **iter**: Number of iterations used
- **alpha**: If an LDA model, the parameter of the Dirichlet distribution for topics over documents

### See Also

- `lda_tidiers`

If `matrix == "beta"` (default), returns a table with one row per topic and term, with columns

- **topic**: Topic, as an integer
- **term**: Term
- **beta**: Probability of a term generated from a topic according to the structural topic model

If `matrix == "gamma"`, returns a table with one row per topic and document, with columns

- **topic**: Topic, as an integer
- **document**: Document name (if given in vector of `document_names`) or ID as an integer
- **gamma**: Probability of topic given document

If called on an object from `estimateEffect`, returns a table with columns

- **topic**: Topic, as an integer
- **term**: The term in the model being estimated and tested
- **estimate**: The estimated coefficient
- **std.error**: The standard error from the linear model
- **statistic**: t-statistic
- **p.value**: two-sided p-value

### Examples

```r
## Not run:
if (requireNamespace("stm", quietly = TRUE)) {
  library(dplyr)
  library(ggplot2)
  library(stm)
  library(janeaustenr)

  austen_sparse <- austen_books() %>%
    unnest_tokens(word, text) %>%
    anti_join(stop_words) %>%
```
count(book, word) %>%
cast_sparse(book, word, n)

```
topic_model <- stm(austen_sparse, K = 12, verbose = FALSE, init.type = "Spectral")
```

# tidy the word-topic combinations
td_beta <- tidy(topic_model)
td_beta

# Examine the topics
td_beta %>%
group_by(topic) %>%
top_n(10, beta) %>%
ungroup() %>%
ggplot(aes(term, beta)) +
geom_col() +
facet_wrap(~ topic, scales = "free") +
coord_flip()

# tidy the document-topic combinations, with optional document names
td_gamma <- tidy(topic_model, matrix = "gamma",
                 document_names = rownames(austen_sparse))
td_gamma

# using stm's gardarianFit, we can tidy the result of a model
# estimated with covariates
effects <- estimateEffect(1:3 ~ treatment, gardarianFit, gadarian)
td_estimate <- tidy(effects)
td_estimate

} # End(Not run)

---

**stop_words**

**Various lexicons for English stop words**

**Description**

English stop words from three lexicons, as a data frame. The snowball and SMART sets are pulled from the tm package. Note that words with non-ASCII characters have been removed.

**Usage**

`stop_words`

**Format**

A data frame with 1149 rows and 2 variables:
word  An English word

lexicon  The source of the stop word. Either "onix", "SMART", or "snowball"

Source

• http://www.lextek.com/manuals/onix/stopwords1.html
• http://snowball.tartarus.org/algorithms/english/stop.txt

Description

Tidy a DocumentTermMatrix or TermDocumentMatrix into a three-column data frame: `term()`, and value (with zeros missing), with one-row-per-term-per-document.

Usage

## S3 method for class 'DocumentTermMatrix'
tidy(x, ...)

## S3 method for class 'TermDocumentMatrix'
tidy(x, ...)

## S3 method for class 'dfm'
tidy(x, ...)

## S3 method for class 'dfmSparse'
tidy(x, ...)

## S3 method for class 'simple_triplet_matrix'
tidy(x, row_names = NULL, col_names = NULL, ...)

Arguments

x  A DocumentTermMatrix or TermDocumentMatrix object

...  Extra arguments, not used

row_names  Specify row names

col_names  Specify column names
Examples

```r
if (requireNamespace("topicmodels", quietly = TRUE)) {
  data("AssociatedPress", package = "topicmodels")
  AssociatedPress

  tidy(AssociatedPress)
}
```

**tidy.Corpus**  
*Tidy a Corpus object from the tm package*

**Description**

Tidy a Corpus object from the tm package. Returns a data frame with one-row-per-document, with a `text` column containing the document’s text, and one column for each local (per-document) metadata tag. For corpus objects from the quanteda package, see `tidy.corpus`.

**Usage**

```r
## S3 method for class 'Corpus'
 tidy(x, collapse = "\n", ...)  
```

**Arguments**

- `x`  
  A Corpus object, such as a VCorpus or PCorpus

- `collapse`  
  A string that should be used to collapse text within each corpus (if a document has multiple lines). Give NULL to not collapse strings, in which case a corpus will end up as a list column if there are multi-line documents.

- `...`  
  Extra arguments, not used

**Examples**

```r
library(dplyr)  # displaying tbl_dfs

if (requireNamespace("tm", quietly = TRUE)) {
  library(tm)
  # tm package examples
  txt <- system.file("texts", "txt", package = "tm")
  ovid <- VCorpus(DirSource(txt, encoding = "UTF-8"),
                   readerControl = list(language = "lat"))

  ovid
  tidy(ovid)

  # choose different options for collapsing text within each
```
tidy(ovid, collapse = "")$text
tidy(ovid, collapse = NULL)$text

# another example from Reuters articles
reut21578 <- system.file("texts", "crude", package = "tm")
reuters <- VCorpus(DirSource(reut21578),
   readerControl = list(reader = readReut21578XMLasPlain))
reuters

 tidy(reuters)
}

---

**tidytext**

*tidytext: Text Mining using ‘dplyr’, ‘ggplot2’, and Other Tidy Tools*

**Description**

This package implements tidy data principles to make many text mining tasks easier, more effective, and consistent with tools already in wide use.

**Details**

Much of the infrastructure needed for text mining with tidy data frames already exists in packages like dplyr, broom, tidyr and ggplot2.

In this package, we provide functions and supporting data sets to allow conversion of text to and from tidy formats, and to switch seamlessly between tidy tools and existing text mining packages.

To learn more about tidytext, start with the vignettes: browseVignettes(package = "tidytext")

---

**tidy_triplet**

*Utility function to tidy a simple triplet matrix*

**Description**

Utility function to tidy a simple triplet matrix

**Usage**

```r
tidy_triplet(x, triplets, row_names = NULL, col_names = NULL)
```

**Arguments**

- **x**: Object with rownames and colnames
- **triplets**: A data frame or list of i, j, x
- **row_names**: rownames, if not gotten from rownames(x)
- **col_names**: colnames, if not gotten from colnames(x)
unnest_characters

Wrapper around unnest_tokens for characters and character shingles

Description

These functions are a wrapper around unnest_tokens(token = "characters") and unnest_tokens(token = "character_shingles").

Usage

unnest_characters(
  tbl, 
  output, 
  input, 
  strip_non_alphanum = TRUE, 
  format = c("text", "man", "latex", "html", "xml"), 
  to_lower = TRUE, 
  drop = TRUE, 
  collapse = NULL, 
  ...
)

unnest_character_shingles(
  tbl, 
  output, 
  input, 
  n = 3L, 
  n_min = n, 
  strip_non_alphanum = TRUE, 
  format = c("text", "man", "latex", "html", "xml"), 
  to_lower = TRUE, 
  drop = TRUE, 
  collapse = NULL, 
  ...
)

Arguments

tbl A data frame
output Output column to be created as string or symbol.
input Input column that gets split as string or symbol.
The output/input arguments are passed by expression and support quasiquote; you can unquote strings and symbols.
strip_non_alphanum Should punctuation and white space be stripped?
unnest_ngrams

format Either "text", "man", "latex", "html", or "xml". If not text, this uses the hunspell tokenizer, and can tokenize only by "word"

to_lower Whether to convert tokens to lowercase. If tokens include URLs (such as with token = "tweets"), such converted URLs may no longer be correct.
drop Whether original input column should get dropped. Ignored if the original input and new output column have the same name.
collapse Whether to combine text with newlines first in case tokens (such as sentences or paragraphs) span multiple lines. If NULL, collapses when token method is "ngrams", "skip_ngrams", "sentences", "lines", "paragraphs", or "regex".

... Extra arguments passed on to tokenizers

n The number of characters in each shingle. This must be an integer greater than or equal to 1.
n_min This must be an integer greater than or equal to 1, and less than or equal to n.

See Also

- unnest_tokens()

Examples

library(dplyr)
library(janeaustenr)

d <- tibble(txt = prideprejudice)

d %>%
  unnest_characters(word, txt)

d %>%
  unnest_character_shingles(word, txt, n = 3)

unnest_ngrams Wrapper around unnest_tokens for n-grams

Description

These functions are wrappers around unnest_tokens(token = "ngrams") and unnest_tokens(token = "skip_ngrams").

Usage

unnest_ngrams(
  tbl, 
  output, 
  input,
unnest_ngrams

n = 3L,
n_min = n,
ngram_delim = " ",
format = c("text", "man", "latex", "html", "xml"),
to_lower = TRUE,
don = TRUE,
collapse = NULL,
...)

unnest_skip_ngrams(
tbl, output, input,
n_min = 1, n = 3, k = 1,
format = c("text", "man", "latex", "html", "xml"),
to_lower = TRUE,
don = TRUE,
collapse = NULL,
...)

Arguments

tbl A data frame
output Output column to be created as string or symbol.
input Input column that gets split as string or symbol.
The output/input arguments are passed by expression and support quasiquotation; you can unquote strings and symbols.
n The number of words in the n-gram. This must be an integer greater than or equal to 1.
n_min This must be an integer greater than or equal to 1, and less than or equal to n.
ngram_delim The separator between words in an n-gram.
format Either "text", "man", "latex", "html", or "xml". If not text, this uses the hunspell tokenizer, and can tokenize only by "word"
to_lower Whether to convert tokens to lowercase. If tokens include URLs (such as with token = "tweets"), such converted URLs may no longer be correct.
don Whether original input column should get dropped. Ignored if the original input and new output column have the same name.
collapse Whether to combine text with newlines first in case tokens (such as sentences or paragraphs) span multiple lines. If NULL, collapses when token method is "ngrams", "skip_ngrams", "sentences", "lines", "paragraphs", or "regex".
... Extra arguments passed on to tokenizers
k For the skip n-gram tokenizer, the maximum skip distance between words. The function will compute all skip n-grams between 0 and k.
### unnest_ptb

**Wrapper around unnest_tokens for Penn Treebank Tokenizer**

### Description

This function is a wrapper around `unnest_tokens( token = "ptb" )`.

### Usage

```r
unnest_ptb(
  tbl,  # A data frame
  output,  # Output column to be created as string or symbol.
  input,  # Input column that gets split as string or symbol.
  format = c("text", "man", "latex", "html", "xml"),
  to_lower = TRUE,
  drop = TRUE,
  collapse = NULL,
  ...  # The output/input arguments are passed by expression and support quasiquotation: you can unquote strings and symbols.
)
```

### Arguments

- **tbl**: A data frame
- **output**: Output column that gets split as string or symbol.
- **input**: Input column to be created as string or symbol.
- **format**: Either "text", "man", "latex", "html", or "xml". If not text, this uses the hunspell tokenizer, and can tokenize only by "word"
Whether to convert tokens to lowercase. If tokens include URLs (such as with token = "tweets"), such converted URLs may no longer be correct.

drop Whether original input column should get dropped. Ignored if the original input and new output column have the same name.

collapse Whether to combine text with newlines first in case tokens (such as sentences or paragraphs) span multiple lines. If NULL, collapses when token method is "ngrams", "skip_ngrams", "sentences", "lines", "paragraphs", or "regex".

Extra arguments passed on to tokenizers

See Also

• unnest_tokens()

Examples

library(dplyr)
library(janeaustenr)

d <- tibble(txt = prideprejudice)

d %>%
  unnest_ptb(word, txt)
unnest_sentences

Arguments

tbl | A data frame
output | Output column to be created as string or symbol.
input | Input column that gets split as string or symbol.
The output/input arguments are passed by expression and support quasiquotation; you can unquote strings and symbols.

pattern | A regular expression that defines the split.

format | Either "text", "man", "latex", "html", or "xml". If not text, this uses the hunspell tokenizer, and can tokenize only by "word"


to_lower | Whether to convert tokens to lowercase. If tokens include URLs (such as with token = "tweets"), such converted URLs may no longer be correct.
drop | Whether original input column should get dropped. Ignored if the original input and new output column have the same name.
collapse | Whether to combine text with newlines first in case tokens (such as sentences or paragraphs) span multiple lines. If NULL, collapses when token method is "ngrams", "skip_ngrams", "sentences", "lines", "paragraphs", or "regex".

... | Extra arguments passed on to tokenizers

See Also

• unnest_tokens()

Examples

library(dplyr)
library(janeaustenr)

d <- tibble(txt = prideprejudice)

d %>%
  unnest_regex(word, txt, pattern = "Chapter [\d"]

unnest_sentences  Wrapper around unnest_tokens for sentences, lines, and paragraphs

Description

These functions are wrappers around unnest_tokens( token = "sentences" ) unnest_tokens( token = "lines" ) and unnest_tokens( token = "paragraphs" ).
Usage

unnest_sentences(
    tbl,
    output,
    input,
    strip_punct = FALSE,
    format = c("text", "man", "latex", "html", "xml"),
    to_lower = TRUE,
    drop = TRUE,
    collapse = NULL,
    ...
)

unnest_lines(
    tbl,
    output,
    input,
    format = c("text", "man", "latex", "html", "xml"),
    to_lower = TRUE,
    drop = TRUE,
    collapse = NULL,
    ...
)

unnest_paragraphs(
    tbl,
    output,
    input,
    paragraph_break = "\n\n",
    format = c("text", "man", "latex", "html", "xml"),
    to_lower = TRUE,
    drop = TRUE,
    collapse = NULL,
    ...
)

Arguments

tbl A data frame

output Output column to be created as string or symbol.

input Input column that gets split as string or symbol.

The output/input arguments are passed by expression and support quasiquotation: you can unquote strings and symbols.

strip_punct Should punctuation be stripped?

format Either "text", "man", "latex", "html", or "xml". If not text, this uses the hunspell tokenizer, and can tokenize only by "word"
 unnest_tokens

 to_lower  Whether to convert tokens to lowercase. If tokens include URLs (such as with token = "tweets"), such converted URLs may no longer be correct.
drop  Whether original input column should get dropped. Ignored if the original input and new output column have the same name.
collapse  Whether to combine text with newlines first in case tokens (such as sentences or paragraphs) span multiple lines. If NULL, collapses when token method is "ngrams", "skip_ngrams", "sentences", "lines", "paragraphs", or "regex".
...  Extra arguments passed on to tokenizers
paragraph_break  A string identifying the boundary between two paragraphs.

See Also
• unnest_tokens()

Examples

library(dplyr)
library(janeaustenr)

d <- tibble(txt = prideprejudice)

d %>%
  unnest_sentences(word, txt)

unnest_tokens  Split a column into tokens using the tokenizers package

Description

Split a column into tokens using the tokenizers package, splitting the table into one-token-per-row. This function supports non-standard evaluation through the tidyeval framework.

Usage

unnest_tokens(
  tbl,
  output,
  input,
  token = "words",
  format = c("text", "man", "latex", "html", "xml"),
  to_lower = TRUE,
  drop = TRUE,
  collapse = NULL,
  ...
)
Arguments

- **tbl**: A data frame
- **output**: Output column to be created as string or symbol.
- **input**: Input column that gets split as string or symbol.
- **token**: Unit for tokenizing, or a custom tokenizing function. Built-in options are "words" (default), "characters", "character_shingles", "ngrams", "skip_ngrams", "sentences", "lines", "paragraphs", "regex", "tweets" (tokenization by word that preserves usernames, hashtags, and URLs), and "ptb" (Penn Treebank). If a function, should take a character vector and return a list of character vectors of the same length.
- **format**: Either "text", "man", "latex", "html", or "xml". If not text, this uses the hunspell tokenizer, and can tokenize only by "word".
- **to_lower**: Whether to convert tokens to lowercase. If tokens include URLs (such as with token = "tweets"), such converted URLs may no longer be correct.
- **drop**: Whether original input column should get dropped. Ignored if the original input and new output column have the same name.
- **collapse**: Whether to combine text with newlines first in case tokens (such as sentences or paragraphs) span multiple lines. If NULL, collapses when token method is "ngrams", "skip_ngrams", "sentences", "lines", "paragraphs", or "regex".
- **...**: Extra arguments passed on to tokenizers, such as strip_punct for "words" and "tweets", n and k for "ngrams" and "skip_ngrams", strip_url for "tweets", and pattern for "regex".

Details

If the unit for tokenizing is ngrams, skip_ngrams, sentences, lines, paragraphs, or regex, the entire input will be collapsed together before tokenizing unless collapse = FALSE.

If format is anything other than "text", this uses the hunspell_parse tokenizer instead of the tokenizers package. This does not yet have support for tokenizing by any unit other than words.

Examples

```r
library(dplyr)
library(janeaustenr)

d <- tibble(txt = prideprejudice)
d

d %>% unnest_tokens(word, txt)
d %>% unnest_tokens(sentence, txt, token = "sentences")
```
unnest_tweets

This function is a wrapper around `unnest_tokens(token = "tweets")`.

**Usage**

```r
unnest_tweets(
  tbl,
  output,
  input,
  strip_punct = TRUE,
  strip_url = FALSE,
  format = c("text", "man", "latex", "html", "xml"),
  to_lower = TRUE,
  drop = TRUE,
  collapse = NULL,
  ...
)
```

**Arguments**

- `tbl` A data frame
- `output` Output column to be created as string or symbol.
<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>input</strong></td>
<td>Input column that gets split as string or symbol.</td>
</tr>
<tr>
<td></td>
<td>The output/input arguments are passed by expression and support <strong>quasiquotation</strong>; you can unquote strings and symbols.</td>
</tr>
<tr>
<td><strong>strip_punct</strong></td>
<td>Should punctuation be stripped?</td>
</tr>
<tr>
<td><strong>strip_url</strong></td>
<td>Should URLs (starting with <code>http(s)</code>) be preserved intact, or removed entirely?</td>
</tr>
<tr>
<td><strong>format</strong></td>
<td>Either &quot;text&quot;, &quot;man&quot;, &quot;latex&quot;, &quot;html&quot;, or &quot;xml&quot;. If not text, this uses the hunspell tokenizer, and can tokenize only by &quot;word&quot;</td>
</tr>
<tr>
<td><strong>to_lower</strong></td>
<td>Whether to convert tokens to lowercase. If tokens include URLs (such as with <code>token = &quot;tweets&quot;</code>), such converted URLs may no longer be correct.</td>
</tr>
<tr>
<td><strong>drop</strong></td>
<td>Whether original input column should get dropped. Ignored if the original input and new output column have the same name.</td>
</tr>
<tr>
<td><strong>collapse</strong></td>
<td>Whether to combine text with newlines first in case tokens (such as sentences or paragraphs) span multiple lines. If NULL, collapses when token method is &quot;ngrams&quot;, &quot;skip_ngrams&quot;, &quot;sentences&quot;, &quot;lines&quot;, &quot;paragraphs&quot;, or &quot;regex&quot;.</td>
</tr>
<tr>
<td>...</td>
<td>Extra arguments passed on to tokenizers</td>
</tr>
</tbody>
</table>

**See Also**

- `unnest_tokens()`

**Examples**

```r
library(dplyr)
tweets <- tibble(
  id = 1,
  txt = "@rOpenSci and #rstats see: https://cran.r-project.org"
)
tweets %>%
  unnest_tweets(out, txt)
```
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