Package ‘graphTweets’

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Type Package
Title Visualise Twitter Interactions
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Description Allows building an edge table from data frame of tweets, also provides function to build nodes and another create a temporal graph.
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gt_collect

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**Description**

Collect

**Usage**

`gt_collect(gt)`

**Arguments**

- **gt**: An object of class `graphTweets` as returned by `gt_edges` and `gt_nodes`.

**Value**

A named list of tibble 1) edges and 2) nodes.

**Examples**

```r
# simulate dataset
tweets <- data.frame(
  text = c("I tweet @you about @him",
           "I tweet @me about @you"),
  screen_name = c("me", "him"),
  retweet_count = c(19, 5),
  status_id = c(1, 2),
  stringsAsFactors = FALSE
)

tweets %>%
  gt_edges(text, screen_name, status_id) %>%
  gt_nodes() %>%
  gt_collect() -> net
```

gt_dyn

Dynamise

Description
Create a dynamic graph to import in Gephi.

Usage
gt_dyn(gt, lifetime = Inf)

Arguments
- `gt`: An object of class `graphTweets` as returned by `gt_edges` and `gt_nodes`.
- `lifetime`: Lifetime of a tweet in milliseconds, defaults to `Inf`.

Examples
## Not run:
# simulate dataset
tweets <- data.frame(
  text = c("I tweet @you about @him and @her",
           "I tweet @me about @you"),
  screen_name = c("me", "him"),
  created_at = c(Sys.time(), Sys.time() + 10000),
  status_id = c(1, 2),
  stringsAsFactors = FALSE
)
tweets %>%
  gt_edges(text, screen_name, status_id, "created_at") %>%
  gt_nodes() %>%
  gt_dyn() %>%
  gt_collect() -> net
## End(Not run)

gt_edges

Edges

Description
Get edges from data.frame of tweets.
gt_edges_from_text

Usage

gt_edges_from_text(data, id, source, tweets, ...)

gt_edges_from_text_(
  data,
  id = "status_id",
  source = "screen_name",
  tweets = "text",
  ...
)

Arguments

data Data.frame of tweets, usually returned by the rtweet package.
source Author of tweets.
target Edges target.
... any other column name, see examples.
tl Set to TRUE to convert source and target to lower case (recommended).

gt An object of class graphTweets as returned by gt_edges and gt_nodes.
func Function to pre-process edges, takes edges as constructed by gt_edges, includes columns named source target and others passed to the three dot construct.
col Column containing co-mentions.

Functions

• gt_edges: Build edges
• gt_preproc_edges: Pre-process edges
• gt_edges_bind: Append edges
Arguments

data   Data.frame of tweets, usually returned by the rtweet package.
id     tweets unique id.
source Author of tweets.
tweets Column containing tweets.
...    any other column name.

Details

The tl arguments stands for tolower and allows converting the #hashtags to lower case as these often duplicated, i.e.: #python #Python.

Value

An object of class graphTweets.

Functions

• gt_edges - Build networks of users.
• gt_co_edges - Build networks of users to hashtags.

Examples

# simulate dataset
tweets <- data.frame(
  text = c("I tweet @you about @him and @her", 
            "I tweet @me about @you"),
  screen_name = c("me", "him"),
  retweet_count = c(19, 5),
  status_id = c(1, 2),
  hashtags = c("rstats", "Python"),
  stringsAsFactors = FALSE
)

tweets %>%
  gt_edges_from_text(status_id, screen_name, text)

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Description

Build igraph object.

Usage

gt_graph(gt)
gt_nodes

Arguments

gt An object of class graphTweets as returned by **gt_edges** and **gt_nodes**.

Value

An object of class igraph.

Examples

```r
# simulate dataset
tweets <- data.frame(
  text = c("I tweet @you about @him", "I tweet @me about @you"),
  screen_name = c("me", "him"),
  retweet_count = c(19, 5),
  status_id = c(1, 2),
  stringsAsFactors = FALSE
)

tweets %>%
  gt_edges(text, screen_name, status_id) %>%
  gt_nodes() %>%
  gt_graph() -> net
```

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**gt_nodes**

**Nodes**

Description

Get nodes from a graphTweets object.

Usage

```r
gt_nodes(gt, meta = FALSE)
```

```
gt_add_meta(gt, name, source, target)
```

Arguments

- **gt** An object of class graphTweets as returned by **gt_edges** and **gt_nodes**.
- **meta** Set to TRUE to add meta data to nodes using **users_data**.
- **name** Name of column to create.
- **source, target** Name of column too apply to edge source and target.

Value

An object of class graphTweets.
gt_save

Functions

- `gt_nodes`: Builds nodes
- `gt_add_meta`: Add meta data to the nodes. The meta data is taken from the edges.

Description

Save the graph to file.

Usage

```r
gt_save(gt, file = "graphTweets.graphml", format = "graphml", ...)
```

Arguments

- `gt`: An object of class `graphTweets` as returned by `gt_edges` and `gt_nodes`.
- `file`: File name including extension (format).
- `format`: Format file format, see `write_graph`.
- `...`: Any other argument to pass to `write_graph`.

Examples

```r
## Not run:
# simulate dataset
tweets <- data.frame(
  text = c("I tweet @you about @him",
            "I tweet @me about @you"),
  screen_name = c("me", "him"),
  retweet_count = c(19, 5),
  created_at = c(Sys.time(), Sys.time() + 15000),
  status_id = c(1, 2),
  stringsAsFactors = FALSE
)

tweets %>%
  gt_edges(text, screen_name, "created_at") %>%
  gt_nodes(TRUE) %>%
  gt_dyn() %>%
  gt_save()

## End(Not run)
```
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