

# Package ‘voston.tcn’

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**Title** Twitter Conversation Networks and Analysis  
**Version** 0.3.3  
**Description** Collects tweets and metadata for threaded conversations and generates networks.  
**Type** Package  
**Imports** dplyr, httr, jsonlite, magrittr, openssl, rlang, stringr, tibble, tidyR  
**Depends** R (>= 3.6)  
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tcn_counts	<i>Get conversation tweet counts</i>
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### Description

Return the number of tweets for conversation ids.

### Usage

```
tcn_counts(
  ids = NULL,
  token = NULL,
  endpoint = "recent",
  start_time = NULL,
  end_time = NULL,
  granularity = "day"
)
```

### Arguments

ids	List. Conversation ids.
token	List. Twitter API tokens.
endpoint	Character string. Twitter API v2 search endpoint. Can be either "recent" for the last 7 days or "all" if users app has access to historical "full-archive" tweets. Default is "recent".
start_time	Character string. Earliest tweet timestamp to return (UTC in ISO 8601 format). If NULL API will default to 30 days before end_time. Default is NULL.
end_time	Character string. Latest tweet timestamp to return (UTC in ISO 8601 format). If NULL API will default to now - 30 seconds. Default is NULL.
granularity	Character string. Granularity or period for tweet counts. Can be "day", "minute" or "hour". Default is "day".

### Value

A dataframe of conversation ids and counts.

### Examples

```
## Not run:
# get tweet count for conversation thread over approximately 7 days
counts <-
  tcn_counts(
    ids = "xxxxxxx",
    token = token,
    endpoint = "all",
    start_time = "2020-09-30T01:00:00Z",
    end_time = "2020-10-07T01:00:00Z",
```

```
      granularity = "day"
    )

# total tweets per conversation id for period
counts$counts %>% dplyr::count(conversation_id, wt = tweet_count)

## End(Not run)
```

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tcn\_network

*Generate network from conversation tweets*

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### Description

Creates the nodes and edges for a Twitter conversation network. An "activity" type network with tweets as nodes, or an "actor" type with users as nodes can be created.

### Usage

```
tcn_network(data = NULL, type = "actor")
```

### Arguments

data	Named list. Dataframes of threaded conversation tweets and users collected by <code>get_threads</code> function.
type	Character string. Type of network to generate, either "actor" or "activity". Default is "actor".

### Value

Named list of dataframes for network nodes and edges.

### Examples

```
## Not run:
# generate twitter conversation network
network <- tcn_network(tweets, "activity")

# network nodes and edges
network$nodes
network$edges

## End(Not run)
```

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 tcn\_threads
 

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*Get threaded conversation tweets*


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### Description

Collects tweets that share the same Twitter conversation ID as supplied tweets.

### Usage

```
tcn_threads(
  tweet_ids = NULL,
  token = NULL,
  endpoint = "recent",
  start_time = NULL,
  end_time = NULL,
  max_results = 100,
  max_total = NULL,
  retry_on_limit = FALSE,
  skip_list = NULL
)
```

### Arguments

tweet_ids	List. Tweet ids of any tweet that are part of the threaded conversations of interest. Also accepts a list of tweet URLs or a mixed list.
token	List. Twitter API tokens.
endpoint	Character string. Twitter API v2 search endpoint. Can be either "recent" for the last 7 days or "all" if users app has access to historical "full-archive" tweets. Default is "recent".
start_time	Character string. Earliest tweet timestamp to return (UTC in ISO 8601 format). If NULL API will default to 30 days before end_time. Default is NULL.
end_time	Character string. Latest tweet timestamp to return (UTC in ISO 8601 format). If NULL API will default to now - 30 seconds. Default is NULL.
max_results	Numeric. Set maximum number of tweets to collect per API v2 request. Up to 100 tweets for standard or 500 tweets for academic projects can be collected per request. Default is 100.
max_total	Numeric. Set maximum total number of tweets to collect as a cap limit precaution. Will only be accurate to within one search request count (being max_results, or 100 for standard or 500 tweets for academic project). This will not be ideal for most cases as an API search generally retrieves the most recent tweets first (reverse-chronological order), therefore the beginning part of the last conversation thread may be absent. Default is NULL.
retry_on_limit	Logical. When the API v2 rate-limit has been reached wait for reset time. Default is FALSE.

`skip_list` Character vector. List of tweet conversation IDs to skip searching if found. This list is automatically appended with `conversation_id`'s when collecting multiple conversation threads to prevent search duplication.

### Value

A named list. Dataframes of tweets, users, errors and request metadata.

### Examples

```
## Not run:
# get twitter conversation threads by tweet ids or urls
tweet_ids <- c("xxxxxxx",
              "https://twitter.com/xxxxxxx/status/xxxxxxx")
tweets <- tcn_threads(tweet_ids, token, endpoint = "recent")

# get twitter conversation threads by tweet ids or urls using historical endpoint
# starting from May 01, 2021.
tweet_ids <- c("xxxxxxx",
              "https://twitter.com/xxxxxxx/status/xxxxxxx")
tweets <- tcn_threads(tweet_ids,
                     token = token,
                     endpoint = "all",
                     start_time = "2021-05-01T00:00:00Z")

## End(Not run)
```

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tcn\_token

*Get a twitter API access token*

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### Description

Assigns a bearer token to the token object or retrieves a bearer token from the Twitter API using a Twitter apps consumer keys.

### Usage

```
tcn_token(bearer = NULL, consumer_key = NULL, consumer_secret = NULL)
```

### Arguments

`bearer` Character string. App bearer token.  
`consumer_key` Character string. App consumer key.  
`consumer_secret` Character string. App consumer secret.

### Value

Named list containing the token.

## Examples

```
## Not run:

# assign bearer token
token <- tcn_token(bearer = "xxxxxxx")

# retrieve twitter app bearer token
token <- tcn_token(consumer_key = "xxxxxxx",
                  consumer_secret = "xxxxxxx")

## End(Not run)
```

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tcn\_tweets

*Get tweets*

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## Description

Collects tweets for a list of tweet ids.

## Usage

```
tcn_tweets(tweet_ids = NULL, token = NULL)
```

## Arguments

tweet_ids	List. Tweet ids or tweet URLs.
token	List. Twitter API tokens.

## Value

A named list. Dataframes of tweets, users, errors and request metadata.

## Examples

```
## Not run:
# get twitter conversation threads by tweet ids or urls
tweet_ids <- c("xxxxxxx",
              "https://twitter.com/xxxxxxx/status/xxxxxxx")
tweets <- tcn_tweets(tweet_ids, token)

## End(Not run)
```

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