

# Package ‘stanza’

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**Type** Package

**Title** 'Stanza' - A 'R' NLP Package for Many Human Languages

**Version** 1.0-3

**Description** An interface to the 'Python' package 'stanza' <<https://stanfordnlp.github.io/stanza/index.html>>. 'stanza' is a 'Python' 'NLP' library for many human languages. It contains support for running various accurate natural language processing tools on 60+ languages.

**License** GPL-3

**Imports** checkmate, reticulate

**Depends** NLP

**SystemRequirements** R >= 4.0, Python >= 3.8, stanza >= 1.3.0

**Encoding** UTF-8

**NeedsCompilation** no

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conda\_install\_stanza    *Conda Install Stanza*

### **Description**

Conda Install Stanza

### **Usage**

```
conda_install_stanza(
  envname = "stanza",
  packages = c("python", "stanza"),
  forge = FALSE,
  channel = c("stanfordnlp"),
  conda = "auto",
  ...
)
```

### **Arguments**

envname	a character string giving the name or path of the conda environment to be used or created for the installation.
packages	a character vector giving the packages to be installed.
forge	a logical giving if conda forge should be used for the installation.
channel	a character vector giving the conda channels to be used.
conda	a character string giving the path to the conda executable.
...	additional arguments passed to conda_install.

### **Value**

NULL

### **Examples**

```
## Not run:
conda_install_stanza()

## End(Not run)
```

---

`entities`*Entities*

---

**Description**

Entities

**Usage**`entities(x, ...)`**Arguments**

`x` an object inheriting from "stanza\_document".  
`...` optional additional arguments, currently not used.

**Value**

a data.frame with the entities.

---

`is_stanza_initialized` *Check if Stanza is Initialized*

---

**Description**

Checks if Stanza is initialized.

**Usage**`is_stanza_initialized()`**Value**

TRUE if Stanza is initialized, otherwise FALSE

**Examples**`is_stanza_initialized()`

---

multi_word_token	<i>Multi-Word Token</i>
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---

### Description

Multi-Word Token

### Usage

```
multi_word_token(x, ...)
```

### Arguments

x	an object of
...	optional additional arguments, currently not used.

### Value

a data.frame with the multi-word tokens.

---

stanza_download	<i>Download Models</i>
-----------------	------------------------

---

### Description

Download pretrained NLP models. For more information about the parameters see [https://stanfordnlp.github.io/stanza/download\\_models.html](https://stanfordnlp.github.io/stanza/download_models.html).

### Usage

```
stanza_download(  
  language = "en",  
  model_dir = stanza_options("model_dir"),  
  package = "default",  
  processors = list(),  
  logging_level = "INFO",  
  resources_url = stanza_options("resources_url"),  
  resources_version = stanza_options("resources_version"),  
  model_url = stanza_options("model_url")  
)
```

**Arguments**

language	a character string giving the language (default is "en").
model_dir	path to the directory for storing the for Stanza models (default is "~/stanza_resources").
package	a character string giving the package to be used (default is "default". In this context package refers to a language specific set of models packaged together to a single ".zip" file.
processors	a character string or named list giving the processors to download models for. If a string is provided it should provide the names of the desired processors as comma seperated string, e.g., "tokenize,pos". If a named list is provided, the name should be the processor name and the values the package name, e.g., list(tokenize = "ewt", pos = "ewt").
logging_level	a character string giving the logging level (default is "INFO"), available levels are c('DEBUG', 'INFO', 'WARNING', 'WARN', 'ERROR', 'CRITICAL', 'FATAL').
resources_url	a character string giving the url to the Stanza model resources. The default value is obtained from Python during the initialization and can be obtained and changed by using stanza_options.
resources_version	a character string giving the version of the resources. The default value is obtained from Python during the initialization and can be obtained and changed by using stanza_options.
model_url	a character string giving the model url. The default value is obtained from Python during the initialization and can be obtained and changed by using stanza_options.

**Value**

NULL

**Examples**

```
if (stanza_options("testing_level") >= 3L) {
  stanza_initialize()
  stanza_download("en")
}
```

---

stanza\_download\_method\_code

*Select Download Method*

---

**Description**

Function to obtain the download method code or list all allowed download methods.

**Usage**

```
stanza_download_method_code(method = NULL)
```

**Arguments**

method            a character string giving the name of the download method. The case of the download method name is ignored. If NULL all allowed download methods are shown.

**Value**

an integer giving the download method code.

**Examples**

```
if (is_stanza_initialized()) {
  stanza_download_method_code()
  stanza_download_method_code("none")
  stanza_download_method_code("reuse_resources")
  stanza_download_method_code("download_resources")
}
```

---

stanza\_initialize        *Initialize Stanza*

---

**Description**

Initialize the Python binding to stanza.

**Usage**

```
stanza_initialize(
  python = NULL,
  virtualenv = NULL,
  condaenv = NULL,
  model_dir = NULL,
  resources_url = NULL,
  model_url = NULL
)
```

**Arguments**

python            a character string giving the path to the Python binary (executable) to be used. The variable python is passed to reticulate::use\_python.

virtualenv        a character string giving the name of the virtual environment, or the path to the virtual environment, to be used. The variable virtualenv is passed to reticulate::use\_virtualenv.

condaenv         a character string giving the name of the Conda environment to be used. The variable condaenv is passed to reticulate::use\_condaenv.

model\_dir        a character string giving the path to the directory storing the Stanza models.

resources\_url a character string giving the url to the Stanza model resources.  
 model\_url a character string giving the model url.

**Value**

NULL

**Examples**

```
if (stanza_options("testing_level") >= 3L) {
  stanza_initialize()
}
```

---

stanza_options	<i>Options</i>
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---

**Description**

Allow the user to set and examine options like

**Usage**

```
stanza_options(option, value, update_python_defaults = FALSE)
```

**Arguments**

option any options can be defined, using 'key, value' pairs. If 'value' is missing the current set value is returned for the given 'option'. If both are missing. all set options are returned.

value the corresponding value to set for the given option.

update\_python\_defaults a logical (default is FALSE) controlling if the corresponding **stanza** variables should also updated in Python.

**Value**

- NULL if both arguments option and value are provided.
- The currently set value if the argument value is missing.
- All set options if the argument option is missing.

**Examples**

```
stanza_options("conda_environment", "stanza")
```

---

stanza_pipeline	<i>NLP Pipeline</i>
-----------------	---------------------

---

### Description

NLP Pipeline

### Usage

```
stanza_pipeline(
    language = "en",
    model_dir = stanza_options("model_dir"),
    package = "default",
    processors = list(),
    logging_level = "INFO",
    use_gpu = FALSE,
    download_method = "reuse_resources",
    ...
)
```

### Arguments

language	a character string giving the language (default is "en").
model_dir	path to the directory for storing the for Stanza models (default is "~/stanza_resources").
package	(default is "default").
processors	FIXME: we should define if we want to use comma seperated string or a character vector.
logging_level	a character string giving the logging level (default is "INFO"), available levels are c('DEBUG', 'INFO', 'WARNING', 'WARN', 'ERROR', 'CRITICAL', 'FATAL').
use_gpu	a logical giving if GPU or CPU should be used (default is FALSE).
download_method	an integer or character string giving the download method code. If a character string is provided, it is passed to stanza_download_method_code to obtain the integer code. Use stanza_download_method_code to obtain the code and list all available download methods.
...	additional named arguments passed to the stanza pipeline.

### Value

a function that can be used to process text.

**Examples**

```
## Not run:  
p <- stanza_pipeline()  
doc <- p('R is a programming language for statistical computing.')
```

  

```
## End(Not run)
```

---

stanza_version	<i>Stanza Version</i>
----------------	-----------------------

---

**Description**

Obtain the version of the **stanza** Python package.

**Usage**

```
stanza_version()
```

**Value**

a character string giving the version of the **stanza** Python package.

**Examples**

```
stanza_version()
```

---

tokens	<i>Tokens</i>
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---

**Description**

Tokens

**Usage**

```
tokens(x, ...)
```

**Arguments**

x                    an object inheriting from "stanza\_document" or "stanza\_sentence".  
...                   optional additional arguments, currently not used.

**Value**

a data.frame with the tokens.

---

`virtualenv_install_stanza`*Install Stanza via Virtual Environment*

---

**Description**

Install Stanza via Virtual Environment

**Usage**

```
virtualenv_install_stanza(  
  envname = "stanza",  
  packages = "stanza",  
  python = NULL,  
  ...  
)
```

**Arguments**

<code>envname</code>	a character string giving the name or path of the virtual environment to be used or created for the installation.
<code>packages</code>	a character vector giving the packages to be installed.
<code>python</code>	a string giving the name or path of the python version to be used (e.g., "python3").
<code>...</code>	additional arguments passed to <code>conda_install</code> .

**Value**

NULL

**Examples**

```
## Not run:  
virtualenv_install_stanza()  
  
## End(Not run)
```

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