

Package ‘aws.comprehend’

July 22, 2025

Type Package

Title Client for 'AWS Comprehend'

Version 0.2.1

Date 2020-03-10

Description Client for 'AWS Comprehend' <<https://aws.amazon.com/comprehend>>, a cloud natural language processing service that can perform a number of quantitative text analyses, including language detection, sentiment analysis, and feature extraction.

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URL <https://github.com/cloudyr/aws.comprehend>

BugReports <https://github.com/cloudyr/aws.comprehend/issues>

Imports httr, jsonlite, aws.signature (>= 0.3.4)

Suggests testthat (>= 2.1.0)

Depends R (>= 3.5.0)

Encoding UTF-8

RoxygenNote 7.0.2

NeedsCompilation no

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Repository CRAN

Date/Publication 2020-03-18 14:30:06 UTC

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aws.comprehend-package
<i>aws.comprehend</i>

Description

AWS Comprehend Client Package

Details

Client for AWS Comprehend (<https://aws.amazon.com/comprehend>), a cloud natural language processing service that can perform a number of quantitative text analyses, including language detection, sentiment analysis, and feature extraction.

Author(s)

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See Also

[detect_language](#), [detect_sentiment](#), [detect_entities](#), [detect_phrases](#)

bind_and_index	<i>Bind and index a ResultList</i>
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Description

Turn a list of data.frames (of different lengths and potentially empty) into a single indexed data.frame. Useful to process a ResultList from ‘comprehendHTTP’.

Usage

```
bind_and_index(index, df_list)
```

Arguments

- | | |
|---------|--|
| index | Vector of indices |
| df_list | List of data.frames to bind and index. Should NOT be a data.frame. |

Details

‘index’ and ‘df_list’ should be the same length. An error is raised otherwise.

```
bind_and_index(1:2, list(data.frame(col = "a"), data.frame(col = "b")))
```

```
bind_and_index(1:3, list( data.frame(col = "a"), data.frame(), data.frame(c("b", "c"))))
```

comprehendHTTP

*Execute AWS Comprehend API Request***Description**

This is the workhorse function to execute calls to the Comprehend API.

Usage

```
comprehendHTTP(
  action,
  query = list(),
  headers = list(),
  body = NULL,
  verbose = getOption("verbose", FALSE),
  region = Sys.getenv("AWS_DEFAULT_REGION", "us-east-1"),
  key = NULL,
  secret = NULL,
  session_token = NULL,
  service = c("comprehend", "comprehendmedical"),
  ...
)
```

Arguments

action	A character string specifying the API action to take
query	An optional named list containing query string parameters and their character values.
headers	A list of headers to pass to the HTTP request.
body	A request body
verbose	A logical indicating whether to be verbose. Default is given by options("verbose").
region	A character string containing the AWS region. If missing, defaults to "us-east-1".
key	A character string containing an AWS Access Key ID. See locate_credentials .
secret	A character string containing an AWS Secret Access Key. See locate_credentials .
session_token	A character string containing an AWS Session Token. See locate_credentials .
service	the Comprehend service to use. Currently either 'comprehend' for the base service or 'comprehendmedical' for the Comprehend Medical service.
...	Additional arguments passed to GET .

Details

This function constructs and signs an Polly API request and returns the results thereof, or relevant debugging information in the case of error.

Value

If successful, a named list. Otherwise, a data structure of class “aws-error” containing any error message(s) from AWS and information about the request attempt.

Author(s)

Thomas J. Leeper

detect_entities	<i>Detect named entities in a source text</i>
-----------------	---

Description

Detect entities in a source text

Usage

```
detect_entities(text, language = "en", ...)
```

Arguments

text	A character string containing a text to entities analyze, or a character vector to perform analysis separately for each element.
language	A character string containing a two-letter language code. Currently “en” and “es” are supported.
...	Additional arguments passed to comprehendHTTP .

Value

A data frame

Examples

```
## Not run:
# simple example
detect_entities("Amazon provides web services. Jeff is their leader.")

txt <-c("Amazon provides web services, like Google.",
        "Jeff is their leader.")
detect_entities(txt)

## End(Not run)
```

detect_language	<i>Detect language in a source text</i>
-----------------	---

Description

Detect language(s) in a source text

Usage

```
detect_language(text, ...)
```

Arguments

text	A character string containing a textual source, or a character vector to detect languages separately for each element.
...	Additional arguments passed to comprehendHTTP .

Value

A data frame of language probabilities.

Examples

```
## Not run:
# simple example
detect_language("This is a test sentence in English")

# two languages in a single text
txt <- "A: ¡Hola! ¿Como está, usted?\nB: Ça va bien. Merci. Et toi?"
detect_language(txt)

# "batch" mode
detect_language(c("A: ¡Hola! ¿Como está, usted?",
                  "B: Ça va bien. Merci. Et toi?"))

## End(Not run)
```

detect_medical_entities	<i>Detect named entities in a source medical text</i>
-------------------------	---

Description

Detect entities in a source medical text

Usage

```
detect_medical_entities(text, language = "en", version = c("2", "1"), ...)
```

Arguments

text	A character string containing a text to entities analyze, or a character vector to perform analysis separately for each element.
language	A character string containing a two-letter language code. Currently only “en” is supported.
version	A character string containing the version of the API that should be used. Currently only "1" or "2" are supported.
...	Additional arguments passed to comprehendHTTP .

Value

A data frame

Examples

```
## Not run:
# simple example
medical_detect_entities("Mrs. Smith comes in today complaining of shortness of breath.")

txt <-c("Mrs. Smith comes in today.",
        "She is complaining of shortness of breath.")
medical_detect_entities(txt)

## End(Not run)
```

detect_medical_phi	<i>Detect Protected Health Information (PHI) in a source medical text</i>
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Description

Detect Protected Health Information (PHI) in a source medical text

Usage

```
detect_medical_phi(text, language = "en", ...)
```

Arguments

text	A character string containing a text to entities analyze, or a character vector to perform analysis separately for each element.
language	A character string containing a two-letter language code. Currently only “en” is supported.
...	Additional arguments passed to comprehendHTTP .

Value

A data frame

Examples

```
## Not run:
# simple example
medical_detect_phi("Mrs. Smith comes in today complaining of shortness of breath.")

txt <-c("Mrs. Smith comes in today.",
        "She is complaining of shortnesss of breath.")
medical_detect_phi(txt)

## End(Not run)
```

detect_phrases	<i>Detect key phrases</i>
----------------	---------------------------

Description

Detect key phrases in a source text

Usage

```
detect_phrases(text, language = "en", ...)
```

Arguments

text	A character string containing a text to analyze, or a character vector to perform analysis separately for each element.
language	A character string containing a two-letter language code. Currently “en” and “es” are supported.
...	Additional arguments passed to comprehendHTTP .

Value

A data frame

Examples

```
## Not run:
# simple example
detect_phrases("Amazon provides web services. Jeff is their leader.")

txt <-c("Amazon provides web services.",
        "Jeff is their leader.")
detect_phrases(txt)

## End(Not run)
```

detect_sentiment	<i>Detect sentiment in a source text</i>
------------------	--

Description

Detect sentiment in a source text

Usage

```
detect_sentiment(text, language = "en", ...)
```

Arguments

text	A character string containing a text to sentiment analyze, or a character vector to perform analysis separately for each element.
language	A character string containing a two-letter language code. Currently “en” and “es” are supported.
...	Additional arguments passed to comprehendHTTP .

Value

A data frame

Examples

```
## Not run:
# simple example
detect_sentiment("I have never been happier. This is the best day ever.")

txt <-c("I have never been happier. This is the best day ever.",
       "I have always been happier. This is the worst day ever.")
detect_sentiment(txt)

## End(Not run)
```

detect_syntax	<i>Detect syntax in a source text</i>
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Description

Detect syntax in a source text

Usage

```
detect_syntax(text, language = "en", ...)
```

Arguments

text	A character string containing a text to syntax analyze, or a character vector to perform analysis separately for each element.
language	A character string containing a two-letter language code.
...	Additional arguments passed to comprehendHTTP .

Value

A data frame

Examples

```
## Not run:
# simple example
detect_syntax("The quick brown fox jumps over the lazy dog.")

txt <-c("The quick brown fox jumps over the lazy dog.",
        "I have never been happier!")
detect_syntax(txt)

## End(Not run)
```

flatten	<i>Flatten embedded data.frames (1 level max)</i>
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Description

Flatten embedded data.frames (1 level max)

Usage

```
flatten(df)
```

Arguments

df	data.frame to flatten
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