

Package ‘imgrec’

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Type Package

Title An Interface for Image Recognition

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URL <https://github.com/cschwem2er/imgrec>

BugReports <https://github.com/cschwem2er/imgrec/issues>

Description Provides an interface for image recognition using the 'Google Vision API' <<https://cloud.google.com/vision/>>. Converts API data for features such as object detection and optical character recognition to data frames. The package also includes functions for analyzing image annotations.

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Encoding UTF-8

RoxygenNote 7.1.1

Imports knitr (>= 1.3.0), base64enc (>= 0.1-0), dplyr (>= 1.0.0), httr (>= 1.4.0), jsonlite (>= 1.7.0), rlang (>= 0.4.0)

Suggests magick (>= 2.6.0), ggplot2 (>= 3.3.0), usethis (>= 2.0.0), pillar (>= 1.5.0), rtweet (>= 0.7.0), rmarkdown (>= 2.7.0)

VignetteBuilder knitr

NeedsCompilation no

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get_annotatons	<i>get image annotations</i>
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Description

Calls the 'Google Vision' API to return annotations. The function automatically creates batches

Usage

```
get_annotatons(images, features, max_res, mode)
```

Arguments

images	A character vector for images to be annotated. Can either be url strings or local images, as specified with mode.
features	A character vector for the features to be returned. Accepts 'all' or any combination of the following inputs: 'label', 'web', 'text', 'face', 'landmark', 'logo', 'safe_search'
max_res	An integer specifying the maximum number of results to be returned for each feature.
mode	Accepts 'url' for image urls and 'local' for file paths to local images.

Value

An response object of class 'gvision_annotatons'.

See Also

Google Vision [features](#) and [quotas](#).

Examples

```
## Not run:

gvision_init()

# one image url
sw_image <- 'https://upload.wikimedia.org/wikipedia/en/4/40/Star_Wars_Phantom_Menace_poster.jpg'
results <- get_annotatons(images = sw_image, # image character vector
                          features = 'all', # request all available features
                          max_res = 10, # maximum number of results per feature
                          mode = 'url') # maximum number of results per feature

# multiple image urls
finn_image <- 'https://upload.wikimedia.org/wikipedia/en/2/2a/Finn-Force_Awakens_%282015%29.png'
padme_image <- 'https://upload.wikimedia.org/wikipedia/en/e/ee/Amidala.png'

input_imgs <- c(sw_image, finn_image, padme_image)
```

```
results <- get_annotatations(images = input_imgs,
                             features = c('label', 'face'), max_res = 5, mode = 'url')

# one local image
temp_img_path <- tempfile(fileext = '.png')
download.file(finn_image, temp_img_path, mode = 'wb', quiet = TRUE)

results <- get_annotatations(images = temp_img_path,
                             features = c('label', 'face'), max_res = 5, mode = 'local')

## End(Not run)
```

gvision_init

authorization for Google Vision

Description

Initializes the authorization credentials for the 'Google Vision' API. Needs to be called before using any other functions of imgrec and requires gvision_key as environment variable.

Usage

```
gvision_init()
```

Value

nothing.

Examples

```
## Not run:
Sys.setenv(gvision_key = "Your Google Vision API key")

gvision_init()

## End(Not run)
```

parse_annotations *parse image annotations*

Description

Parses the annotations and converts most of the features to data frames. Also stores the corresponding image identifiers for each feature as 'img_id'

Usage

```
parse_annotations(annotations)
```

Arguments

annotations An annotation object created with [get_annotations](#).

Value

A list containing data frames for each feature:

- labels** label annotations
- web_labels** web label annotations
- web_similar** similar web images
- web_match_partial** partial matching web images
- web_match_full** full matching web images
- web_match_pages** matching web pages
- faces** face annotations
- objects** object annotations
- logos** logo annotations
- landmarks** landmark annotations
- full_text** full text annotation
- safe_serarch** safe search annotation
- colors** dominant color annotations
- crop_hints** crop hints for ratios 0.8/1.0/1.2

Examples

```
## Not run:
# initialize api credentials
gvision_init()

# annotate images
finn_image <- 'https://upload.wikimedia.org/wikipedia/en/2/2a/Finn-Force_Awakens_%282015%29.png'
sw_image <- 'https://upload.wikimedia.org/wikipedia/en/8/82/Leiadeathstar.jpg'
```

```
padme_image <- 'https://upload.wikimedia.org/wikipedia/en/e/ee/Amidala.png'

results <- get_annotatons(images = c(finn_image, sw_image, padme_image),
                           features = 'all', max_res = 10, mode = 'url')
# parse annotations
img_data <- parse_annotatons(results)

# available feature data frames
names(img_data)

## End(Not run)
```

save_json	<i>save annotation data as JSON</i>
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Description

Writes raw JSON data as returned by the Google Vision API to a UTF-8 encoded local file.

Usage

```
save_json(annotations, file)
```

Arguments

annotations	An annotation object created with get_annotatons .
file	Local path where the JSON data should be stored.

Value

nothing.

Examples

```
## Not run:
gvision_init()

finn_image <- 'https://upload.wikimedia.org/wikipedia/en/2/2a/Finn-Force_Awakens_%282015%29.png'
results <- get_annotatons(images = finn_image, features = 'all',
                          max_res = 10, mode = 'url')
temp_file_path <- tempfile(fileext = '.json')
save_json(results, temp_file_path)

## End(Not run)
```

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