

# Package ‘imgrec’

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**Type** Package

**Title** An Interface for Image Recognition

**Version** 0.1.3

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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.

**License** MIT + file LICENSE

**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 (>= 2.7.0), ggplot2 (>= 3.3.0), usethis (>= 2.1.0), pillar (>= 1.6.0), rtweet (>= 0.7.0), rmarkdown (>= 2.7.0)

**VignetteBuilder** knitr

**NeedsCompilation** no

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get_annotations	<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_annotations(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\_annotations'.

### 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_annotations(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)
```

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gvision\_init

*authorization for Google Vision*

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## 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)
```

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parse\_annotations      *parse image annotations*

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## 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)
```

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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 <a href="#">get_annotatons</a> .
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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