

Package ‘promote’

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Type Package

Title Client for the 'Alteryx Promote' API

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Description Deploy, maintain, and invoke predictive models using the 'Alteryx Promote' REST API. 'Alteryx Promote' is available at the URL: <<https://www.alteryx.com/products/alteryx-promote>>.

Depends R (>= 3.2.0)

URL <https://github.com/alteryx/promote-r-client>

Imports httr, jsonlite, stringr,

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add.dependency	<i>Private function that adds a package to the list of dependencies that will be installed on the Promote server</i>
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Description

Private function that adds a package to the list of dependencies that will be installed on the Promote server

Usage

```
add.dependency(name, importName, src, version, install, auth_token, ref,
  subdir)
```

Arguments

name	name of the package to be installed
importName	name under which the package is imported (for a github package, this may be different from the name used to install it)
src	source that the package is installed from (CRAN or github)
version	version of the package
install	whether or not the package should be installed in the model image
auth_token	a personal access token for github or gitlab repositories
ref	The git branch, tag, or SHA of the package to be installed
subdir	The path to the repo subdirectory holding the package to be installed

add.metadata	<i>Private function that adds metadata about the model that will be installed on the Promote server the metadata is arranged as key-value pairs</i>
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Description

Private function that adds metadata about the model that will be installed on the Promote server the metadata is arranged as key-value pairs

Usage

```
add.metadata(key, value)
```

Arguments

key	key name for the metadata entry
value	value for the metadata entry

capture.src	<i>Private function for capturing the source code of model</i>
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Description

Private function for capturing the source code of model

Usage

```
capture.src(funcs, capture.model.require = TRUE)
```

Arguments

funcs	functions to capture, defaults to required promote model functions
capture.model.require	flag to capture the model.require function

check.image.size	<i>Private function for checking the size of the user's image.</i>
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Description

Private function for checking the size of the user's image.

Usage

```
check.image.size()
```

is.https	<i>Private predicate function that checks if the protocol of a url is https.</i>
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Description

Private predicate function that checks if the protocol of a url is https.

Usage

```
is.https(x)
```

Arguments

x	is a url string
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promote.deploy	<i>Deploy a model to promote's servers</i>
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Description

This function takes model.predict and creates a model on promote's servers which can be called from any programming language via promote's REST API (see [promote.predict](#)).

Usage

```
promote.deploy(model_name, confirm = TRUE, custom_image = NULL)
```

Arguments

model_name	name of your model
confirm	boolean indicating whether to prompt before deploying
custom_image	name of the image you'd like your model to use

Examples

```
promote.config <- c(
  username = "your username",
  apikey = "your apikey",
  env = "http://sandbox.promotehq.com/"
)
iris$Sepal.Width_sq <- iris$Sepal.Width^2
fit <- glm(I(Species)=="virginica" ~ ., data=iris)

model.predict <- function(df) {
  data.frame("prediction"=predict(fit, df, type="response"))
}
```

```
## Not run:
promote.library("randomForest")
promote.deploy("irisModel")

## End(Not run)
```

promote.get	<i>Private function for performing a GET request</i>
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Description

Private function for performing a GET request

Usage

```
promote.get(endpoint, query = c())
```

Arguments

endpoint	/path for REST request
query	url parameters for request

promote.library	<i>Import one or more libraries and add them to the promote model's dependency list</i>
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Description

Import one or more libraries and add them to the promote model's dependency list

Usage

```
promote.library(name, src = "version", version = NULL, user = NULL,
  install = TRUE, auth_token = NULL, url = NULL, ref = "master",
  subdir = NULL)
```

Arguments

name	name of the package to be added
src	source from which the package will be installed on Promote (github or CRAN)
version	version of the package to be added
user	Github username associated with the package
install	Whether the package should also be installed into the model on the Promote server; this is typically set to False when the package has already been added to the Promote base image.

auth_token	Personal access token string associated with a private package's repository
url	A valid URL pointing to a remote hosted git repository
ref	The git branch, tag, or SHA of the package to be installed
subdir	The path to the repo subdirectory holding the package to be installed

Examples

```
## Not run:
promote.library("MASS")
promote.library(c("wesanderson", "stringr"))
promote.library("hilaryparker/cats")
promote.library("cats", src="github", user="hilaryparker")
promote.library("my_public_package", install=FALSE)
promote.library("my_public_package", src="git", url="https://gitlab.com/username/rpkg.git")
promote.library("my_proprietary_package", src="github", auth_token=<yourToken>)
promote.library("testPkg", src="github", user="emessess", auth_token=<yourToken>)
promote.library("priv_pkg",
  src="git",
  url="https://x-access-token:<PersonalAccessToken>ATgithub.com/username/rpkg.git")
promote.library("priv_pkg",
  src="git",
  url="https://x-access-token:<PersonalAccessToken>ATgitlab.com/username/rpkg.git",
  ref="stage")
promote.library("my_package", src="github", auth_token=<yourToken> subdir="/pathToSubdir/")

## End(Not run)
```

promote.ls

Private function for determining model dependencies

Description

List all object names which are dependencies of and 'model.predict'.

Usage

```
promote.ls()
```

promote.metadata *Add metadata to the deployment of your promote model*

Description

Add metadata to the deployment of your promote model

Usage

```
promote.metadata(name, value)
```

Arguments

name	key name for the metadata entry
value	value for the metadata entry

Examples

```
## Not run:
promote.metadata("key", "value")
promote.metadata("R_squared", summary(fit)$r.squared)
promote.metadata("R_squared_adj", summary(fit)$adj.r.squared)
promote.metadata("deploy_node", Sys.info()[["nodename"]])

## End(Not run)
```

promote.post *Private function for performing a POST request*

Description

Private function for performing a POST request

Usage

```
promote.post(endpoint, query = c(), data, silent = TRUE,
             bulk = FALSE)
```

Arguments

endpoint	/path for REST request
query	url parameters for request
data	payload to be converted to raw JSON
silent	should output of url to console be silenced? Default is FALSE.
bulk	is this a bulk style request? Default is FALSE.

promote.predict *Make a prediction using promote.*

Description

This function calls promote's REST API and returns a response formatted as a data frame.

Usage

```
promote.predict(model_name, data, model_owner, raw_input = FALSE,
               silent = TRUE)
```

Arguments

model_name	the name of the model you want to call
data	input data for the model
model_owner	the owner of the model [optional]
raw_input	when true, incoming data will NOT be coerced into data.frame
silent	should output of url to console (via promote.post) be silenced? Default is FALSE.

Examples

```
promote.config <- c(
  username = "your username",
  apikey = "your apikey",
  env = "http://sandbox.promotehq.com/"
)
## Not run:
promote.predict("irisModel", iris)

## End(Not run)
```

promote.predict_raw *Calls promote's REST API and returns a JSON document containing both the prediction and associated metadata.*

Description

Calls promote's REST API and returns a JSON document containing both the prediction and associated metadata.

Usage

```
promote.predict_raw(model_name, data, model_owner, raw_input = FALSE,
                   silent = TRUE)
```


Arguments

<code>model_name</code>	the name of the model you want to call
<code>data</code>	input data for the model
<code>model_owner</code>	the owner of the model [optional]
<code>raw_input</code>	when true, incoming data will NOT be coerced into data.frame
<code>silent</code>	should output of url to console (via <code>promote.post</code>) be silenced? Default is FALSE.

Examples

```
promote.config <- c(
  username = "your username",
  apikey = "your apikey",
  env="http://ip_of_alteryx_promote.com"
)
## Not run:
promote.predict_raw("irisModel", iris)

## End(Not run)
```

`promote.spider.block` *Private function for recursively looking for variables*

Description

Private function for recursively looking for variables

Usage

```
promote.spider.block(block, defined.vars = c())
```

Arguments

<code>block</code>	code block to spider
<code>defined.vars</code>	variables which have already been defined within the scope of the block. e.g. function argument

`promote.spider.func` *Private function for spidering function source code*

Description

Private function for spidering function source code

Usage

```
promote.spider.func(func.name)
```

Arguments

`func.name` name of function you want to spider

`promote.unload` *Removes a library from the promote model's dependency list*

Description

Removes a library from the promote model's dependency list

Usage

```
promote.unload(name)
```

Arguments

`name` of the package to be removed

Examples

```
## Not run:  
promote.unload("wesanderson")  
  
## End(Not run)
```

set.model.require	<i>Private function that generates a model.require function based on the libraries that have been imported in this session.</i>
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Description

Private function that generates a model.require function based on the libraries that have been imported in this session.

Usage

set.model.require()

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