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

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

**Description**

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

**Usage**

```r
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

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

**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

Private function for capturing the source code of model.

**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

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check.image.size

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

**Description**

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

**Usage**

check.image.size()
is.https

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

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

Usage
is.https(x)

Arguments
x is a url string

promote.deploy

Deploy a model to promote's servers

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"))
}
Private function for performing a GET request

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

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

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

```r
## 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", subdirectory="/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

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

```r
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

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

Arguments

block: code block to spider

defined.vars: 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**

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

## End(Not run)
```
set.model.require

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

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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