

Package ‘hakaiApi’

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Title Authenticated HTTP Request Client for the 'Hakai' API

Version 1.0.5

Description Initializes a class that obtains API credentials and provides a method to use those credentials to make GET requests to the 'Hakai' API server. Usage instructions are documented at <https://hakaiinstitute.github.io/hakai-api/>.

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URL <https://github.com/HakaiInstitute/hakai-api-client-r>

BugReports <https://github.com/HakaiInstitute/hakai-api-client-r/issues>

Depends R (>= 4.2.0)

Imports dplyr, httr2, R6, readr, tibble

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Client	<i>The Hakai API Client Class</i>
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Description

Class to use to make authenticated API requests for Hakai data. Credentials can be provided via the HAKAI_API_TOKEN environment variable or through a credentials file.

Public fields

`api_root` The api_root you are logged in to

Methods

Public methods:

- [Client\\$new\(\)](#)
- [Client\\$get\(\)](#)
- [Client\\$post\(\)](#)
- [Client\\$put\(\)](#)
- [Client\\$patch\(\)](#)
- [Client\\$remove_credentials\(\)](#)
- [Client\\$clone\(\)](#)

Method `new()`: Log into Google to gain credential access to the API

Usage:

```
Client$new(
  api_root = "https://hecate.hakai.org/api",
  login_page = "https://hecate.hakai.org/api-client-login",
  credentials_file = NULL
)
```

Arguments:

`api_root` Optional API base url to fetch data. Defaults to "https://hecate.hakai.org/api"
`login_page` Optional API login page url to display to user. Defaults to "https://hecate.hakai.org/api-client-login"
`credentials_file` Optional path to the credentials cache file. Defaults to a file in the user's data directory as determined by `tools::R_user_dir()`

Details: Credentials can be provided in two ways: 1. Via the HAKAI_API_TOKEN environment variable (contains query string: "token_type=Bearer&access_token=...") 2. Via a credentials file (default: in user data directory via `tools::R_user_dir()`) The environment variable takes precedence if both are available.

Returns: A client instance

Examples:

```
try(  
  client <- Client$new()  
)  
# Using environment variable  
Sys.setenv(HAKAI_API_TOKEN = "token_type=Bearer&access_token=TOKEN")  
try(  
  client <- Client$new()  
)  
# Using custom credentials file  
try(  
  client <- Client$new(credentials_file = "/path/to/creds")  
)
```

Method `get()`: Send a GET request to the API

Usage:

```
Client$get(endpoint_url, col_types = NULL)
```

Arguments:

`endpoint_url` The API endpoint url - can be a full URL or a relative path that will be appended to the `api_root`

`col_types` a readr type specification

Returns: A dataframe of the requested data

Examples:

```
try(client$get("/aco/views/projects"))  
try(client$get("https://hecate.hakai.org/api/aco/views/projects"))
```

Method `post()`: Send a POST request to the API

Usage:

```
Client$post(endpoint_url, rec_data)
```

Arguments:

`endpoint_url` The API endpoint url - can be a full URL or a relative path that will be appended to the `api_root`

`rec_data` dataframe, list, or other R data structure to send as part of the post request payload

Returns: post request response status code and description

Method `put()`: Send a PUT request to the API

Usage:

```
Client$put(endpoint_url, rec_data)
```

Arguments:

`endpoint_url` The API endpoint url - can be a full URL or a relative path that will be appended to the `api_root`

`rec_data` dataframe, list, or other R data structure to send as part of the post request payload

Returns: PUT request response status code and description

Method `patch()`: Send a PATCH request to the API

Usage:

```
Client$patch(endpoint_url, rec_data)
```

Arguments:

`endpoint_url` The API endpoint url - can be a full URL or a relative path that will be appended to the `api_root`

`rec_data` dataframe, list, or other R data structure to send as part of the post request payload

Returns: PATCH request response status code and description

Method `remove_credentials()`: Remove your cached login credentials to logout of the client

Usage:

```
Client$remove_credentials()
```

Examples:

```
try(
  client$remove_credentials()
)
```

Method `clone()`: The objects of this class are cloneable with this method.

Usage:

```
Client$clone(deep = FALSE)
```

Arguments:

`deep` Whether to make a deep clone.

Examples

```
## Not run:
# Initialize a new client
try(
  client <- Client$new()
)

# Or use environment variable for token
Sys.setenv(HAKAI_API_TOKEN = "token_type=Bearer&access_token=TOKEN")
try(
  client <- Client$new()
)

# Follow authorization prompts to log in

# Retrieve some data. See <https://hakaiinstitute.github.io/hakai-api/> for options.
try(
  projects_2020 <- client$get("/aco/views/projects?project_year=2020&fields=project_name")
)

try(
```

```

    print(projects_2020)
  )
# # A tibble: 20 x 1
#   project_name
#   <chr>
# 1 Fountain FN
# 2 Haig Glacier
# 3 Fraser River - Chimney Creek West William Canyon
# 4 Cruickshank WS
# ...

## End(Not run)

## -----
## Method `Client$new`
## -----

try(
  client <- Client$new()
)
# Using environment variable
Sys.setenv(HAKAI_API_TOKEN = "token_type=Bearer&access_token=TOKEN")
try(
  client <- Client$new()
)
# Using custom credentials file
try(
  client <- Client$new(credentials_file = "/path/to/creds")
)

## -----
## Method `Client$get`
## -----

try(client$get("/aco/views/projects"))
try(client$get("https://hecate.hakai.org/api/aco/views/projects"))

## -----
## Method `Client$remove_credentials`
## -----

try(
  client$remove_credentials()
)

```

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