

# 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

**Suggests** knitr, markdown, rmarkdown, withr, testthat (>= 3.0.0)

**VignetteBuilder** knitr

**Encoding** UTF-8

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**RoxygenNote** 7.3.2

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**NeedsCompilation** no

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**Repository** CRAN

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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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