

# Package ‘zoltr’

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**Title** Interface to the 'Zoltar' Forecast Repository API

**Version** 1.0.1

**Description** 'Zoltar' <<https://www.zoltardata.com/>>

is a website that provides a repository of model forecast results in a standardized format and a central location. It supports storing, retrieving, comparing, and analyzing time series forecasts for prediction challenges of interest to the modeling community. This package provides functions for working with the 'Zoltar' API, including connecting and authenticating, getting meta information (projects, models, and forecasts, and truth), and uploading, downloading, and deleting forecast and truth data.

**URL** <https://github.com/reichlab/zoltr>, <http://reichlab.io/zoltr/>

**BugReports** <https://github.com/reichlab/zoltr/issues>

**License** GPL-3

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---

busy_poll_job	<i>Poll job's status</i>
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---

**Description**

A convenience function that polls the passed Job's status waiting for either FAILED, TIMEOUT, or SUCCESS.

**Usage**

```
busy_poll_job(zoltar_connection, job_url, verbose = TRUE)
```

**Arguments**

zoltar_connection	A ZoltarConnection object as returned by <a href="#">new_connection()</a>
job_url	URL of a valid job in zoltar_connection
verbose	if TRUE, print messages on job status poll

**Examples**

```
## Not run:  
  busy_poll_job(conn, "http://example.com/api/job/2/")  
  
## End(Not run)
```

---

create_model	<i>Create a model</i>
--------------	-----------------------

---

**Description**

Creates the model in the passed project using the passed list. Fails if a model with the passed name already exists.

**Usage**

```
create_model(zoltar_connection, project_url, model_config)
```

**Arguments**

zoltar_connection	A ZoltarConnection object as returned by <a href="#">new_connection()</a>
project_url	url of a project in zoltar_connection's projects. this is the project the new model will be created in
model_config	A list containing a Zoltar model configuration. An example: example-model-config.json . Full documentation at <a href="https://docs.zoltardata.com/">https://docs.zoltardata.com/</a> .

**Value**

model\_url of the newly-created model

**Examples**

```
## Not run:
new_model_url <- create_model(conn, "https://www.zoltardata.com/api/project/9/",
                             jsonlite::read_json("example-model-config.json"))

## End(Not run)
```

---

create_project	<i>Create a project</i>
----------------	-------------------------

---

**Description**

Creates the project using the passed project configuration list. Fails if a project with the passed name already exists.

**Usage**

```
create_project(zoltar_connection, project_config)
```

**Arguments**

zoltar\_connection  
A ZoltarConnection object as returned by [new\\_connection\(\)](#)

project\_config A list containing a Zoltar project configuration. note that this list validated by the server and not here. An example: cdc-project.json Full documentation at <https://docs.zoltardata.com/>.

**Value**

project\_url of the newly-created project

**Examples**

```
## Not run:
new_project_url <- create_project(conn, jsonlite::read_json("cdc-project.json"))

## End(Not run)
```

---

create_timezero	<i>Create a timezero</i>
-----------------	--------------------------

---

### Description

Creates the timezero in the passed project using the passed list. Fails if a timezero with the passed timezero\_date already exists.

### Usage

```
create_timezero(
  zoltar_connection,
  project_url,
  timezero_date,
  data_version_date = NULL,
  is_season_start = FALSE,
  season_name = ""
)
```

### Arguments

zoltar_connection	A ZoltarConnection object as returned by <a href="#">new_connection()</a>
project_url	url of a project in zoltar_connection's projects. this is the project the new timezero will be created in
timezero_date	The timezero's date in YYYY-MM-DD format as documented at <a href="https://docs.zoltardata.com/fileformats/#creation-configuration-json">https://docs.zoltardata.com/fileformats/#creation-configuration-json</a>
data_version_date	Optional data version date in the same format. Pass NULL if the timezero does not have one
is_season_start	TRUE if this starts a season, and FALSE otherwise
season_name	Applicable when is_season_start is true, names the season, e.g., "2010-2011"

### Value

model\_url of the newly-created timezero

### Examples

```
## Not run:
new_timezero_url <- create_timezero(conn, "https://www.zoltardata.com/api/project/9/",
  "2022-11-08", "2022-11-09", TRUE, "2010-2011")

## End(Not run)
```

---

`data_frame_from_forecast_data`

*Converts forecast data from Zoltar's native list format to a data.frame*

---

**Description**

Converts forecast data from Zoltar's native list format to a `data.frame`

**Usage**

```
data_frame_from_forecast_data(forecast_data)
```

**Arguments**

`forecast_data` Forecast data as a list in the Zoltar standard format

**Value**

A `data.frame` from `forecast_data` in zoltar-specific format. The columns are: 'unit', 'target', 'class', 'value', 'cat', 'prob', 'sample', 'quantile', 'family', 'param1', 'param2', 'param3'. They are documented at <https://docs.zoltardata.com/fileformats/#forecast-data-format-csv>. NB: columns are all character (i.e., data type information from `forecast_data` is lost). Also note that a retracted prediction element is represented as a single row with NA values for all but the first four columns.

**Examples**

```
## Not run:
forecast_data <- jsonlite::read_json("docs-predictions.json")
data_frame <- data_frame_from_forecast_data(forecast_data)

## End(Not run)
```

---

`delete_forecast`

*Delete a forecast*

---

**Description**

Deletes the forecast with the passed URL. This is permanent and cannot be undone.

**Usage**

```
delete_forecast(zoltar_connection, forecast_url)
```

**Arguments**

zoltar\_connection  
A ZoltarConnection object as returned by [new\\_connection\(\)](#)

forecast\_url URL of a forecast in zoltar\_connection's forecasts

**Value**

A Job URL for the deletion

**Examples**

```
## Not run:  
delete_forecast(conn, "http://example.com/api/forecast/1/")  
  
## End(Not run)
```

---

delete_model	<i>Delete a model</i>
--------------	-----------------------

---

**Description**

Deletes the model with the passed ID. This is permanent and cannot be undone.

**Usage**

```
delete_model(zoltar_connection, model_url)
```

**Arguments**

zoltar\_connection  
A ZoltarConnection object as returned by [new\\_connection\(\)](#)

model\_url URL of a model in zoltar\_connection's models

**Value**

None

**Examples**

```
## Not run:  
delete_model(conn, "http://www.zoltardata.com/api/model/1/")  
  
## End(Not run)
```

---

delete_project	<i>Delete a project</i>
----------------	-------------------------

---

**Description**

Deletes the project with the passed URL. This is permanent and cannot be undone.

**Usage**

```
delete_project(zoltar_connection, project_url)
```

**Arguments**

zoltar_connection	A ZoltarConnection object as returned by <a href="#">new_connection()</a>
project_url	URL of a project in zoltar_connection's projects

**Value**

None

**Examples**

```
## Not run:  
delete_project(conn, "https://www.zoltardata.com/api/project/9/")  
  
## End(Not run)
```

---

download_forecast	<i>Gets a forecast's data</i>
-------------------	-------------------------------

---

**Description**

Gets a forecast's data

**Usage**

```
download_forecast(zoltar_connection, forecast_url)
```

**Arguments**

zoltar_connection	A ZoltarConnection object as returned by <a href="#">new_connection()</a>
forecast_url	URL of a forecast in zoltar_connection's forecasts

**Value**

Forecast data as a list in the Zoltar standard format. meta information is ignored. Full documentation at <https://docs.zoltardata.com/>.

**Examples**

```
## Not run:
  forecast_data <- download_forecast(conn, "http://example.com/api/forecast/1/")

## End(Not run)
```

---

do_zoltar_query	<i>A convenience function to construct and execute a Zoltar query for either forecast or truth data.</i>
-----------------	--

---

**Description**

A convenience function to construct and execute a Zoltar query for either forecast or truth data.

**Usage**

```
do_zoltar_query(
  zoltar_connection,
  project_url,
  query_type,
  models = NULL,
  units = NULL,
  targets = NULL,
  timezeros = NULL,
  types = NULL,
  as_of = NULL,
  verbose = TRUE
)
```

**Arguments**

zoltar_connection	A ZoltarConnection object as returned by <a href="#">new_connection()</a>
project_url	URL of a project in zoltar_connection's projects
query_type	A character indicating the type of query to run. Must be one of: "forecasts" or "truth".
models	Character vector of model abbreviations. Used for query_type = "forecasts".
units	Character vector of units to retrieve. Used for all query_types.
targets	Character vector of targets to retrieve. Used for all query_types.
timezeros	Character vector of timezeros to retrieve in YYYY_MM_DD_DATE_FORMAT, e.g., '2017-01-17'. Used for all query_types.

types	Character vector of prediction types to retrieve. Used for query_type = "forecasts".
as_of	a datetime used for either query_type that constrains based on forecast issued_at. must be a datetime as parsed by the dateutil python library <a href="https://dateutil.readthedocs.io/en/stable/index.html">https://dateutil.readthedocs.io/en/stable/index.h</a> , which accepts a variety of styles.
verbose	if TRUE, print messages on job status poll

### Value

A data.frame of Job's data. Full documentation at <https://docs.zoltardata.com/>.

### Examples

```
## Not run:
forecast_data <- do_zoltar_query(
  conn, "https://www.zoltardata.com/api/project/44/", "forecasts",
  models=c("CMU-TimeSeries", "UMass-MechBayes"), units=c("01003", "US"),
  targets=c("1 wk ahead inc death"), targets=c("2020-07-19", "2020-07-20"),
  types=c("quantile"), as_of="2020-07-10")
truth_data <- do_zoltar_query(
  conn, "https://www.zoltardata.com/api/project/44/", "truth", c("01003", "US"),
  c("1 wk ahead inc death"), c("2020-07-19", "2020-07-20"))

## End(Not run)
```

---

edit\_model

*Edit a model*

---

### Description

Edits the model in the passed project using the passed list. Fails if a model with the passed name already exists.

### Usage

```
edit_model(zoltar_connection, model_url, model_config)
```

### Arguments

zoltar_connection	A ZoltarConnection object as returned by <a href="#">new_connection()</a>
model_url	url of a project in zoltar_connection's projects. this is the project the new model will be edited in
model_config	A list containing a Zoltar model configuration. An example: example-model-config.json . Full documentation at <a href="https://docs.zoltardata.com/">https://docs.zoltardata.com/</a> .

**Examples**

```
## Not run:
edit_model(conn, "https://www.zoltardata.com/api/model/2/",
  jsonlite::read_json("example-model-config.json"))

## End(Not run)
```

---

forecasts	<i>Get a model's forecasts</i>
-----------	--------------------------------

---

**Description**

Get a model's forecasts

**Usage**

```
forecasts(zoltar_connection, model_url)
```

**Arguments**

`zoltar_connection`  
A ZoltarConnection object as returned by [new\\_connection\(\)](#)

`model_url` URL of a model in `zoltar_connection`'s models

**Value**

A data.frame of forecast information for the passed model

**Examples**

```
## Not run:
the_forecasts <- forecasts(conn, "http://www.zoltardata.com/api/model/1/")

## End(Not run)
```

---

forecast_data_from_cdc_csv_file	<i>Loads and converts a CDC CSV file to Zoltar's native list format</i>
---------------------------------	---

---

**Description**

Loads and converts a CDC CSV file to Zoltar's native list format

**Usage**

```
forecast_data_from_cdc_csv_file(season_start_year, cdc_csv_file)
```

**Arguments**

season\_start\_year  
An integer specifying the "season" that cdc\_csv\_file is in. Used to convert EWs to YYYY\_MM\_DD\_DATE\_FORMAT. **zoltr** uses week 30 as the season breakpoint, e.g. the "2016/2017 season" starts with

cdc\_csv\_file A CDC CSV file

**Value**

cdc\_csv\_file's data as Zoltar's native list format, but only the "predictions" item, and not "meta"

**Examples**

```
## Not run:  
forecast_data <- forecast_data_from_cdc_csv_file(2016, "my_forecast.cdc.csv")  
  
## End(Not run)
```

---

forecast\_data\_from\_cdc\_data\_frame  
[forecast\\_data\\_from\\_cdc\\_csv\\_file\(\)](#) *helper*

---

**Description**

[forecast\\_data\\_from\\_cdc\\_csv\\_file\(\)](#) helper

**Usage**

```
forecast_data_from_cdc_data_frame(season_start_year, cdc_data_frame)
```

**Arguments**

season\_start\_year  
as passed to [forecast\\_data\\_from\\_cdc\\_csv\\_file\(\)](#)

cdc\_data\_frame ""

**Value**

same as [forecast\\_data\\_from\\_cdc\\_csv\\_file\(\)](#)

---

forecast_info	<i>Gets a forecast's information</i>
---------------	--------------------------------------

---

**Description**

Gets a forecast's information

**Usage**

```
forecast_info(zoltar_connection, forecast_url)
```

**Arguments**

zoltar\_connection  
 A ZoltarConnection object as returned by [new\\_connection\(\)](#)

forecast\_url  
 URL of a forecast in zoltar\_connection's forecasts

**Value**

A list of forecast information for the passed forecast\_url

**Examples**

```
## Not run:
  the_forecast_info <- forecast_info(conn, "http://example.com/api/forecast/1/")

## End(Not run)
```

---

get_resource	<i>Get JSON for a resource (URL). Authenticates if necessary</i>
--------------	--

---

**Description**

Get JSON for a resource (URL). Authenticates if necessary

**Usage**

```
get_resource(zoltar_connection, url, col_types = NULL)
```

**Arguments**

zoltar\_connection  
 A ZoltarConnection object as returned by [new\\_connection\(\)](#)

url  
 A string of the resource's URL

col\_types  
 Same as readr::read\_csv takes

**Value**

A list that contains JSON information for the passed URL

---

job_data	<i>Gets a job's file's data</i>
----------	---------------------------------

---

**Description**

Downloads the data for jobs that have an associated file, such as a query's results. Called on Jobs that are the results of a project forecast or truth queries via `submit_query()`. NB: It is a 404 Not Found error if this is called on a Job that has no underlying S3 data file, which can happen b/c: 1) 24 hours has passed (the expiration time) or 2) the Job is not complete and therefore has not saved the data file. For the latter you may use `busy_poll_job()` to ensure the job is done.

**Usage**

```
job_data(zoltar_connection, job_url, query_type)
```

**Arguments**

zoltar_connection	A ZoltarConnection object as returned by <code>new_connection()</code>
job_url	URL of a valid job in zoltar_connection that has a data file associated with it
query_type	A character indicating the type of query to run. Must be one of: "forecasts" or "truth".

**Value**

A data.frame of Job's data. The columns depend on query\_type - see <https://docs.zoltardata.com/fileformats/#truth-data-format-csv> and <https://docs.zoltardata.com/fileformats/#forecast-data-format-csv>.

**Examples**

```
## Not run:
  the_job_data <- job_data(conn, "http://example.com/api/job/2/")

## End(Not run)
```

---

job_info	<i>Get a job's information</i>
----------	--------------------------------

---

### Description

Gets a job's information that can be used to track the job's progress. Jobs represent long-running asynchronous activities like uploading a file (e.g., a forecast or truth) or running a query.

### Usage

```
job_info(zoltar_connection, job_url)
```

### Arguments

zoltar_connection	A ZoltarConnection object as returned by <a href="#">new_connection()</a>
job_url	URL of a valid job in zoltar_connection

### Value

A list of job information for the passed job\_url. It has these names: id, url, status, user, created\_at, updated\_at, failure\_message, input\_json, output\_json

### Examples

```
## Not run:
the_job_info <- job_info(conn, "http://example.com/api/job/2/")

## End(Not run)
```

---

job_info_forecast_url	<i>Get a new forecast upload's url</i>
-----------------------	--

---

### Description

A helper function for jobs representing file uploads. Returns the URL of a newly-uploaded forecast from job\_info.

### Usage

```
job_info_forecast_url(zoltar_connection, the_job_info)
```

### Arguments

zoltar_connection	A ZoltarConnection object as returned by <a href="#">new_connection()</a>
the_job_info	a list object as returned by <a href="#">job_info()</a>

**Value**

A URL of the new forecast

**Examples**

```
## Not run:  
  new_forecast_url <- job_info_forecast_url(conn, "http://example.com/api/job/2/")  
  
## End(Not run)
```

---

latest_forecasts	<i>Get a project's latest_forecasts</i>
------------------	---

---

**Description**

Get a project's latest\_forecasts

**Usage**

```
latest_forecasts(zoltar_connection, project_url)
```

**Arguments**

zoltar\_connection  
A ZoltarConnection object as returned by [new\\_connection\(\)](#)

project\_url  
URL of a project in zoltar\_connection's projects

**Value**

A data.frame of all of the latest forecasts for the passed project. columns: forecast\_id, source. (Later we may generalize to allow passing specific columns to retrieve, such as 'forecast\_model\_id', 'time\_zero\_id', 'issued\_at', 'created\_at', 'source', and 'notes'.)

**Examples**

```
## Not run:  
  the_latest_forecasts <- latest_forecasts(conn, "https://www.zoltardata.com/api/project/9/")  
  
## End(Not run)
```

---

models	<i>Get a project's models</i>
--------	-------------------------------

---

**Description**

Get a project's models

**Usage**

```
models(zoltar_connection, project_url)
```

**Arguments**

zoltar\_connection  
A ZoltarConnection object as returned by [new\\_connection\(\)](#)

project\_url  
URL of a project in zoltar\_connection's projects

**Value**

A data.frame of model contents for all models in the passed project

**Examples**

```
## Not run:  
the_models <- models(conn, "https://www.zoltardata.com/api/project/9/")  
  
## End(Not run)
```

---

model_info	<i>Get information about a model</i>
------------	--------------------------------------

---

**Description**

Get information about a model

**Usage**

```
model_info(zoltar_connection, model_url)
```

**Arguments**

zoltar\_connection  
A ZoltarConnection object as returned by [new\\_connection\(\)](#)

model\_url  
URL of a model in zoltar\_connection's models

**Value**

A list of model information for the passed model\_url

**Examples**

```
## Not run:
  the_model_info <- model_info(conn, "http://www.zoltardata.com/api/model/1/")

## End(Not run)
```

---

new_connection	<i>Get a connection to a Zoltar host</i>
----------------	--

---

**Description**

Returns a new connection object, which is the starting point for working with the Zoltar API. Once you have the connection you can call `zoltar_authenticate()` on it, and then call `projects()` to get a list of Project objects to start working with.

**Usage**

```
new_connection(host = "https://zoltardata.com")
```

**Arguments**

host            The Zoltar site to connect to. Does *not* include a trailing slash ('/'). Defaults to <https://zoltardata.com>

**Details**

A note on URLs: We require a trailing slash ('/') on all URLs. The only exception is the host arg passed to this function. This convention matches Django REST framework one, which is what Zoltar is written in.

**Value**

A ZoltarConnection object

**Examples**

```
## Not run:
  conn <- new_connection()

## End(Not run)
```

---

projects	<i>Get information about all projects</i>
----------	---

---

**Description**

Get information about all projects

**Usage**

```
projects(zoltar_connection)
```

**Arguments**

zoltar\_connection  
A ZoltarConnection object as returned by [new\\_connection\(\)](#)

**Value**

A data.frame of all projects' contents

**Examples**

```
## Not run:  
the_projects <- projects(conn)  
  
## End(Not run)
```

---

project_info	<i>Get information about a project</i>
--------------	--

---

**Description**

Get information about a project

**Usage**

```
project_info(zoltar_connection, project_url)
```

**Arguments**

zoltar\_connection  
A ZoltarConnection object as returned by [new\\_connection\(\)](#)  
project\_url URL of a project in zoltar\_connection's projects

**Value**

A list of project information for the passed project\_url

## Examples

```
## Not run:
  the_project_info <- project_info(conn, "https://www.zoltardata.com/api/project/9/")

## End(Not run)
```

---

```
quantile_data_frame_from_forecast_data
  Converts forecast data from Zoltar's native list format to a quantile
  data.frame
```

---

## Description

Converts forecast data from Zoltar's native list format to a quantile data.frame

## Usage

```
quantile_data_frame_from_forecast_data(forecast_data)
```

## Arguments

forecast\_data Forecast data as a list in the Zoltar standard format

## Value

A data.frame from forecast\_data that's the same as [data\\_frame\\_from\\_forecast\\_data\(\)](#) does except only includes point and quantile rows, and with this header: 'location', 'target', 'type', 'quantile', 'value', i.e., 'unit' -> 'location' and 'class' -> 'type'

## Examples

```
## Not run:
  forecast_data <- jsonlite::read_json("docs-predictions.json")
  data_frame <- quantile_data_frame_from_forecast_data(forecast_data)

## End(Not run)
```

---

submit_query	<i>Submit a query</i>
--------------	-----------------------

---

**Description**

Submits a request for the execution of a query of either forecasts or truth in this Project.

**Usage**

```
submit_query(zoltar_connection, project_url, query_type, query)
```

**Arguments**

zoltar_connection	A ZoltarConnection object as returned by <a href="#">new_connection()</a>
project_url	URL of a project in zoltar_connection's projects
query_type	A character indicating the type of query to run. Must be one of: "forecasts" or "truth".
query	A list of character lists that constrains the queried data. It is the analog of the JSON object documented at <a href="https://docs.zoltardata.com/">https://docs.zoltardata.com/</a> . The keys vary depending on query_type. References to models, units, targets, and timezeros are strings that name the objects, and not IDs.

**Value**

a Job URL for tracking the query and getting its results when it successfully completes

**Examples**

```
## Not run:
job_url <- submit_query(conn, "https://www.zoltardata.com/api/project/9/", "forecasts",
  list("models"=list("60-contact", "CovidIL_100"), "units"=list("US"),
    "targets"=list(1894, 1897), "timezeros"=list("2020-05-14", "2020-05-09"),
    "types"=list("point", "quantile")))

## End(Not run)
```

---

targets	<i>Get a project's targets</i>
---------	--------------------------------

---

**Description**

Get a project's targets

**Usage**

```
targets(zoltar_connection, project_url)
```

**Arguments**

```
zoltar_connection      A ZoltarConnection object as returned by new\_connection\(\)
project_url           URL of a project in zoltar_connection's projects
```

**Value**

A data.frame of target contents for the passed project

**Examples**

```
## Not run:
the_targets <- targets(conn, "https://www.zoltardata.com/api/project/9/")

## End(Not run)
```

---

target_info	<i>Get information about a target</i>
-------------	---------------------------------------

---

**Description**

Get information about a target

**Usage**

```
target_info(zoltar_connection, target_url)
```

**Arguments**

```
zoltar_connection      A ZoltarConnection object as returned by new\_connection\(\)
target_url             URL of a target in zoltar_connection's targets
```

**Value**

A list of target information for the passed target\_url

**Examples**

```
## Not run:
the_target_info <- target_info(conn, "https://www.zoltardata.com/api/target/3/")

## End(Not run)
```

---

timezeros	<i>Get a project's timezeros</i>
-----------	----------------------------------

---

**Description**

Get a project's timezeros

**Usage**

```
timezeros(zoltar_connection, project_url)
```

**Arguments**

`zoltar_connection` A ZoltarConnection object as returned by [new\\_connection\(\)](#)

`project_url` URL of a project in `zoltar_connection`'s projects

**Value**

A data.frame of timezero contents for the passed project

**Examples**

```
## Not run:  
the_timezeros <- timezeros(conn, "https://www.zoltardata.com/api/project/9/")  
  
## End(Not run)
```

---

timezero_info	<i>Get information about a timezero</i>
---------------	---

---

**Description**

Get information about a timezero

**Usage**

```
timezero_info(zoltar_connection, timezero_url)
```

**Arguments**

`zoltar_connection` A ZoltarConnection object as returned by [new\\_connection\(\)](#)

`timezero_url` URL of a timezero in `zoltar_connection`'s timezeros

**Value**

A list of timezero information for the passed timezero\_url

**Examples**

```
## Not run:
  the_timezero_info <- timezero_info(conn, "https://www.zoltardata.com/api/timezero/3/")

## End(Not run)
```

---

truth_info	<i>Get information about a project's truth</i>
------------	--

---

**Description**

Get information about a project's truth

**Usage**

```
truth_info(zoltar_connection, project_url)
```

**Arguments**

zoltar\_connection      A ZoltarConnection object as returned by [new\\_connection\(\)](#)  
project\_url      URL of a project in zoltar\_connection's projects

**Value**

A list of project truth information for the passed project\_url

**Examples**

```
## Not run:
  the_truth_info <- truth_info(conn, "https://www.zoltardata.com/api/project/9/")

## End(Not run)
```

---

unit_info	<i>Get information about a unit</i>
-----------	-------------------------------------

---

**Description**

Get information about a unit

**Usage**

```
unit_info(zoltar_connection, unit_url)
```

**Arguments**

zoltar\_connection  
A ZoltarConnection object as returned by [new\\_connection\(\)](#)

unit\_url  
URL of a unit in zoltar\_connection's zoltar\_units

**Value**

A list of unit information for the passed unit\_url

**Examples**

```
## Not run:  
the_unit_info <- unit_info(conn, "https://www.zoltardata.com/api/unit/3/")  
  
## End(Not run)
```

---

upload_forecast	<i>Upload a forecast</i>
-----------------	--------------------------

---

**Description**

This function submits forecast data to the server for uploading. Returns a Job object that can be used to up, which depends on the number of current uploads in the queue. Zoltar tracks these via Job objects.)

**Usage**

```
upload_forecast(  
  zoltar_connection,  
  model_url,  
  timezero_date,  
  forecast_data,  
  is_json = TRUE,  
  notes = ""  
)
```

**Arguments**

zoltar_connection	A ZoltarConnection object as returned by <a href="#">new_connection()</a>
model_url	URL of a model in zoltar_connection's projects
timezero_date	The date of the project timezero you are uploading for. it is a string in format YYYYMMDD
forecast_data	Forecast data to upload data to upload, either a list (if is_json==TRUE) or a dataframe otherwise. formats are documented at <a href="https://docs.zoltardata.com/">https://docs.zoltardata.com/</a>
is_json	TRUE if forecast_data is JSON (list) format, and FALSE if it is CSV (dataframe) format
notes	Optional user notes for the new forecast

**Value**

A Job URL for the upload

**Examples**

```
## Not run:
forecast_data <- jsonlite::read_json("docs-predictions.json")
job_url <- upload_forecast(conn, "http://www.zoltardata.com/api/model/1/",
                           "2017-01-17", forecast_data, TRUE, "a mid-January forecast")

## End(Not run)
```

---

upload_truth	<i>Upload truth data</i>
--------------	--------------------------

---

**Description**

Uploads the data in truth\_csv\_file to the project identified by project\_url.

**Usage**

```
upload_truth(zoltar_connection, project_url, truth_csv_file, issued_at = NULL)
```

**Arguments**

zoltar_connection	A ZoltarConnection object as returned by <a href="#">new_connection()</a>
project_url	URL of a project in zoltar_connection's projects
truth_csv_file	A CSV file as documented at <a href="https://docs.zoltardata.com/fileformats/#truth-data-format-csv">https://docs.zoltardata.com/fileformats/#truth-data-format-csv</a>
issued_at	optional datetime to use for the uploaded truth forecasts' issued_at value in ISO 8601 format. NB: it must include timezone information. (the default issued_at is the time of upload.) the value must obey the constraints documented at <a href="https://docs.zoltardata.com/forecastversions/#forecast-version-rules">https://docs.zoltardata.com/forecastversions/#forecast-version-rules</a>

**Value**

A Job URL for the upload

**Examples**

```
## Not run:
  job_url <- upload_truth(conn, "http://www.zoltardata.com/api/project/1/", "truth.csv")

## End(Not run)
```

---

`zoltar_authenticate` *Log in to a Zoltar host*

---

**Description**

Returns a new `ZoltarConnection` object, which is the starting point for working with the Zoltar API. Once you have the connection you can call `zoltar_authenticate()` on it, and call `projects()` to get a list of objects to start working with.

**Usage**

```
zoltar_authenticate(zoltar_connection, username, password)
```

**Arguments**

<code>zoltar_connection</code>	A <code>ZoltarConnection</code> object as returned by <code>new_connection()</code> .
<code>username</code>	Username for the account to use on the connection's host
<code>password</code>	Password ""

**Value**

None

**Examples**

```
## Not run:
  zoltar_authenticate(conn, "USERNAME", "PASSWORD")

## End(Not run)
```

---

zoltar_units	<i>Get a project's zoltar_units</i>
--------------	-------------------------------------

---

**Description**

Get a project's zoltar\_units

**Usage**

```
zoltar_units(zoltar_connection, project_url)
```

**Arguments**

zoltar\_connection  
A ZoltarConnection object as returned by [new\\_connection\(\)](#)

project\_url  
URL of a project in zoltar\_connection's projects

**Value**

A data.frame of unit contents for the passed project

**Examples**

```
## Not run:  
the_units <- zoltar_units(conn, "https://www.zoltardata.com/api/project/9/")  
  
## End(Not run)
```

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