Package 'neptune'

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Type Package

Title Interface to 'Neptune' Experiment Tracking and Management Tool

Version 0.1.0

Maintainer Jakub Czakon <jakub.czakon@neptune.ai>

Description Interface to 'Neptune', experiment tracking tool that helps you organize
your machine learning experiments. You can log your hyperparameter, metrics, model binaries and
performance charts, organize them with tags and names and share everything easily in the app.
For more information see <https://neptune.ai/>.

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URL https://github.com/neptune-ai/neptune-r

BugReports https://github.com/neptune-ai/neptune-r/issues

Encoding UTF-8

LazyData true

SystemRequirements Python (>= 3.0.0), Neptune (https://neptune.ai/)

Imports reticulate

NeedsCompilation no

Author Mateusz Dominiak [aut],
Jakub Czakon [aut, cre]

Repository CRAN

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append_tag   *Append tag to 'Neptune' experiment*

Description

Append a tag or array of tags to a 'Neptune' experiment. 'Neptune' is a lightweight experiment tracking tool, for more information see <https://neptune.ai/>.

Usage

```
append_tag(tag)
```

Arguments

tag   string or array of strings, a tag or array of tags that you want to attach

Author(s)

Authors:

- Mateusz Dominiak
- Maintainer: Jakub Czakon <jakub.czakon@neptune.ai>

See Also

Useful links:

- <https://neptune.ai/>
- Documentation <https://docs.neptune.ai/>
- Report bugs at <https://github.com/neptune-ai/neptune-r/issues>

Examples

```
## Not run:
# We are using api token for an anonymous user neptuner. For your projects use your private token.
init_neptune(api_token = 'ANONYMOUS',
             project_name = 'shared/r-integration')

# Start logging
create_experiment(name = 'my first experiment')
append_tag('resnet50')
```

```
append_tag(c('no-augmentation', 'focal-loss'))

# Stop logging
stop_experiment()
# See an example experiment here https://ui.neptune.ai/o/shared/org/r-integration/e/RIN-56/logs

## End(Not run)
```

---

create_experiment   *Create 'Neptune' experiment*

Description

It create a 'Neptune' experiment to which you can log hyperparameters, metrics, images, or other artifacts. 'Neptune' is a lightweight experiment tracking tool, for more information see <https://neptune.ai/>.

Usage

```
create_experiment(name = "default",
                  params = reticulate::dict(),
                  tags =  c()
)
```

Arguments

name	string, a name of Neptune experiment, by default set to 'default'
params	list (or reticulate::dict), named list of name-value pairs. Used to define experiment parameters
tags	tags, array of tags used to organize experiments. Good examples are 'preprocessing-v1' or 'resnet50'

Author(s)

Authors:

- Mateusz Dominiak

- Maintainer: Jakub Czakon <jakub.czakon@neptune.ai>

See Also

Useful links:

- <https://neptune.ai/>

- Documentation <https://docs.neptune.ai/>

- Report bugs at <https://github.com/neptune-ai/neptune-r/issues>

Examples

```
## Not run:
# We are using api token for an anonymous user neptuner. For your projects use your private token.
init_neptune(api_token = 'ANONYMOUS',
             project_name = 'shared/r-integration')

# Start logging
create_experiment(name = 'my-first-experiment',
                  params = list(metric='Accuracy', model='rf', 'cvFolds'=2)
)
log_metric('accuracy', 0.92)

# Stop logging
stop_experiment()
# See an example experiment here https://ui.neptune.ai/o/shared/org/r-integration/e/RIN-56/logs

## End(Not run)
```

---

get_neptune   *Get 'Neptune' experiment object*

Description

It gets 'Neptune' experiment object so that it can be used directly. 'Neptune' is a lightweight experiment tracking tool, for more information see <https://neptune.ai/>.

Usage

```
get_neptune()
```

Author(s)

Authors:

- Mateusz Dominiak
- Maintainer: Jakub Czakon <jakub.czakon@neptune.ai>

See Also

Useful links:

- <https://neptune.ai/>
- Documentation <https://docs.neptune.ai/>
- Report bugs at <https://github.com/neptune-ai/neptune-r/issues>

Examples

```
## Not run:
# We are using api token for an anonymous user neptuner. For your projects use your private token.
init_neptune(api_token = 'ANONYMOUS',
             project_name = 'shared/r-integration')

# Fetch Neptune logger object
npt = get_neptune()

# Create experiment
npt$create_experiment(name = 'my first experiment')

# Start logging
npt$log_metric('auc', 0.45)

# Stop logging
npt$stop()
# See an example experiment here https://ui.neptune.ai/o/shared/org/r-integration/e/RIN-56/logs

## End(Not run)
```

---

init_neptune	*Initialize 'Neptune' project*

Description

It initializes a 'Neptune' project in which you can create experiments and log experiment metadata. 'Neptune' is a lightweight experiment tracking tool, for more information see <https://neptune.ai/>.

Usage

```
init_neptune(project_name,
             api_token = NULL,
             python = NULL,
             python_path)
```

Arguments

project_name	string, a name of the project in Neptune. Has a format 'USERNAME/PROJECT_NAME'
api_token	string, your Neptune API token that you can copy from your Neptune account
python	string, environemnt type. Can be one of 'python', 'conda', 'miniconda', and 'venv'
python_path	string, path to your python distribution. For exmaple if you selected python ='miniconda' you can have an example python_path = '/home/marry/miniconda3/bin/python'

Author(s)

Authors:

- Mateusz Dominiak

- Maintainer: Jakub Czakon <jakub.czakon@neptune.ai>

See Also

Useful links:

- <https://neptune.ai/>

- Documentation <https://docs.neptune.ai/>

- Report bugs at <https://github.com/neptune-ai/neptune-r/issues>

Examples

```
## Not run:
# We are using api token for an anonymous user neptuner. For your projects use your private token.
init_neptune(api_token = 'ANONYMOUS',
             project_name = 'shared/r-integration')

# Start logging
create_experiment(name = 'my first experiment')
log_metric('accuracy', 0.92)

# Stop logging
stop_experiment()
# See an example experiment here https://ui.neptune.ai/o/shared/org/r-integration/e/RIN-56/logs

## End(Not run)
```

---

install_neptune   *Install 'Neptune' client*

Description

Instructions for installing 'Neptune' client package into your Python environemnt. 'Neptune' is a lightweight experiment tracking tool, for more information see <https://neptune.ai/>.

Usage

```
install_neptune()
```

Author(s)

Authors:

- Mateusz Dominiak

- Maintainer: Jakub Czakon <jakub.czakon@neptune.ai>

See Also

Useful links:

- <https://neptune.ai/>
- Documentation <https://docs.neptune.ai/>
- Report bugs at <https://github.com/neptune-ai/neptune-r/issues>

Examples

```
## Not run:
install_neptune()

## End(Not run)
```

---

log_artifact   *Log artifact to 'Neptune' experiment*

Description

It logs artifact like model binary or some other file to 'Neptune' Experiment. 'Neptune' is a lightweight experiment tracking tool, for more information see <https://neptune.ai/>.

Usage

```
log_artifact(filename)
```

Arguments

filename   string, filename of the artifact that you want to log to Neptune

Author(s)

Authors:

- Mateusz Dominiak
- Maintainer: Jakub Czakon <jakub.czakon@neptune.ai>

See Also

Useful links:

- <https://neptune.ai/>
- Documentation <https://docs.neptune.ai/>
- Report bugs at <https://github.com/neptune-ai/neptune-r/issues>

Examples

```
## Not run:
# We are using api token for an anonymous user neptuner. For your projects use your private token.
init_neptune(api_token = 'ANONYMOUS',
             project_name = 'shared/r-integration')

# Start logging
create_experiment(name = 'my first experiment')

file = tempfile()
x=1:10
save(x, file=file)
log_artifact(filename = file)

# Stop logging
stop_experiment()
# See an example experiment here https://ui.neptune.ai/o/shared/org/r-integration/e/RIN-56/logs

## End(Not run)
```

---

log_image   *Log image to 'Neptune' experiment*

Description

It logs image to a given image channel of 'Neptune' Experiment. 'Neptune' is a lightweight experiment tracking tool, for more information see <https://neptune.ai/>.

Usage

```
log_image(name = 'image_channel', filename)
```

Arguments

name	string, a name of the image channel in Neptune 'image_channel' by default
filename	string, filename of the image that you want to log to Neptune

Author(s)

Authors:

- Mateusz Dominiak

- Maintainer: Jakub Czakon <jakub.czakon@neptune.ai>

See Also

Useful links:

- <https://neptune.ai/>
- Documentation <https://docs.neptune.ai/>
- Report bugs at <https://github.com/neptune-ai/neptune-r/issues>

Examples

```
## Not run:
# We are using api token for an anonymous user neptuner. For your projects use your private token.
init_neptune(api_token = 'ANONYMOUS',
             project_name = 'shared/r-integration')

# Start logging
create_experiment(name = 'my first experiment')

f <- tempfile()
png(filename = f, width = 480, height = 480)
plot(1:10, type = 'l')
dev.off()

log_image(name = 'performance charts', filename = f)

# Stop logging
stop_experiment()
# See an example experiment here https://ui.neptune.ai/o/shared/org/r-integration/e/RIN-56/logs

## End(Not run)
```

---

log_metric	*Log metric to 'Neptune' experiment*

Description

It logs metric like accuracy or AUC to 'Neptune' Experiment. 'Neptune' is a lightweight experiment tracking tool, for more information see <https://neptune.ai/>.

Usage

```
log_metric(metric, value)
```

Arguments

metric	string, name of the metric that you want to log to Neptune. You can log more than one value to the same metric. If you do that, a chart will be created.
value	float, a metric value that you want to log to Neptune

Author(s)

Authors:

- Mateusz Dominiak

- Maintainer: Jakub Czakon <jakub.czakon@neptune.ai>

See Also

Useful links:

- <https://neptune.ai/>

- Documentation <https://docs.neptune.ai/>

- Report bugs at <https://github.com/neptune-ai/neptune-r/issues>

Examples

```
## Not run:
# We are using api token for an anonymous user neptuner. For your projects use your private token.
init_neptune(api_token = 'ANONYMOUS',
             project_name = 'shared/r-integration')

# Start logging
create_experiment(name = 'my first experiment',
                  params = list(metric='Accuracy', model='rf', 'cvFolds'=2)
)
log_metric('accuracy', 0.92)
log_metric('accuracy', 0.52)
log_metric('auc', 0.87)

# Stop logging
stop_experiment()
# See an example experiment here https://ui.neptune.ai/o/shared/org/r-integration/e/RIN-56/logs

## End(Not run)
```

---

set_neptune_token   *Set 'Neptune' API token*

Description

It sets your 'Neptune' API token to the 'NEPTUNE_API_TOKEN' environment variable, so that 'Neptune' knows who are you. 'Neptune' is a lightweight experiment tracking tool, for more information see <https://neptune.ai/>.

Usage

```
set_neptune_token(token)
```

Arguments

token   string, your Neptune API token that you can copy from your Neptune account

Author(s)

Authors:

- Mateusz Dominiak
- Maintainer: Jakub Czakon <jakub.czakon@neptune.ai>

See Also

Useful links:

- <https://neptune.ai/>
- Documentation <https://docs.neptune.ai/>
- Report bugs at <https://github.com/neptune-ai/neptune-r/issues>

Examples

```
## Not run:
# We are using api token for an anonymous user neptuner. For your projects use your private token.
set_neptune_token(token = 'ANONYMOUS')
init_neptune(project_name = 'shared/r-integration')

# Start logging
create_experiment(name = 'my first experiment')
log_metric('accuracy', 0.92)

# Stop logging
stop_experiment()
# See an example experiment here https://ui.neptune.ai/o/shared/org/r-integration/e/RIN-56/logs

## End(Not run)
```

---

set_property   *Set a property to 'Neptune' experiment*

Description

It logs a property:value pair to 'Neptune' Experiment. 'Neptune' is a lightweight experiment tracking tool, for more information see <https://neptune.ai/>.

Usage

```
set_property(property, value)
```

Arguments

property	string, a name of the property that you want to log to Neptune
value	string, a value of the property that you want to log to Neptune

Author(s)

Authors:

- Mateusz Dominiak
- Maintainer: Jakub Czakon <jakub.czakon@neptune.ai>

See Also

Useful links:

- <https://neptune.ai/>
- Documentation <https://docs.neptune.ai/>
- Report bugs at <https://github.com/neptune-ai/neptune-r/issues>

Examples

```
## Not run:
# We are using api token for an anonymous user neptuner. For your projects use your private token.
init_neptune(api_token = 'ANONYMOUS',
             project_name = 'shared/r-integration')

# Start logging
create_experiment(name = 'my first experiment')
set_property(property = 'data-version', value = 'asd19210u1asd')
log_metric('accuracy', 0.92)

# Stop logging
stop_experiment()
# See an example experiment here https://ui.neptune.ai/o/shared/org/r-integration/e/RIN-56/logs

## End(Not run)
```

---

stop_experiment	*Stop 'Neptune' experiment*

Description

It stops 'Neptune' experiment and no additional metadata can be logged to it. 'Neptune' is a lightweight experiment tracking tool, for more information see <https://neptune.ai/>.

Usage

```
stop_experiment()
```

Author(s)

Authors:

- Mateusz Dominiak
- Maintainer: Jakub Czakon <jakub.czakon@neptune.ai>

See Also

Useful links:

- <https://neptune.ai/>
- Documentation <https://docs.neptune.ai/>
- Report bugs at <https://github.com/neptune-ai/neptune-r/issues>

Examples

```
## Not run:
# We are using api token for an anonymous user neptuner. For your projects use your private token.
init_neptune(api_token = 'ANONYMOUS',
             project_name = 'shared/r-integration')

# Start logging
create_experiment(name = 'my first experiment')
log_metric('accuracy', 0.92)

# Stop logging
stop_experiment()
# See an example experiment here https://ui.neptune.ai/o/shared/org/r-integration/e/RIN-56/logs

## End(Not run)
```

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