

Package ‘orbital’

July 1, 2024

Title Predict with 'tidymodels' Workflows in Databases

Version 0.1.0

Description Turn 'tidymodels' workflows into objects containing the sufficient sequential equations to perform predictions. These smaller objects allow for low dependency prediction locally or directly in databases.

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URL <https://github.com/tidymodels/orbital>

BugReports <https://github.com/tidymodels/orbital/issues>

Imports cli, rlang

Suggests dbplyr, dplyr, dtplyr, jsonlite, kknn, parsnip, recipes, testthat (>= 3.0.0), tidypredict, workflows

Config/testthat/edition 3

Encoding UTF-8

RoxygenNote 7.3.1.9000

NeedsCompilation no

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Repository CRAN

Date/Publication 2024-07-01 10:00:02 UTC

Contents

orbital	2
orbital_dt	3
orbital_inline	3
orbital_json_read	4
orbital_json_write	5
orbital_predict	6
orbital_sql	7
to_r_fun	8

orbital	<i>Turn tidymodels workflows into equations</i>
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Description

Turn tidymodels workflows into equations

Usage

```
orbital(x, ...)
```

Arguments

x	A workflow object.
...	Not currently used.

Value

A orbital object.

Examples

```
library(workflows)
library(recipes)
library(parsnip)

rec_spec <- recipe(mpg ~ ., data = mtcars) %>%
  step_normalize(all_numeric_predictors())

lm_spec <- linear_reg()

wf_spec <- workflow(rec_spec, lm_spec)

wf_fit <- fit(wf_spec, mtcars)

orbital(wf_fit)
```

orbital_dt	<i>Convert to data.table code</i>
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Description

Convert to data.table code

Usage

```
orbital_dt(x)
```

Arguments

x A orbital object.

Value

data.table code.

Examples

```
library(workflows)
library(recipes)
library(parsnip)

rec_spec <- recipe(mpg ~ ., data = mtcars) %>%
  step_normalize(all_numeric_predictors())

lm_spec <- linear_reg()

wf_spec <- workflow(rec_spec, lm_spec)

wf_fit <- fit(wf_spec, mtcars)

orbital_obj <- orbital(wf_fit)

orbital_dt(orbital_obj)
```

orbital_inline	<i>Use orbital object splicing function</i>
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Description

Use orbital object splicing function

Usage

```
orbital_inline(x)
```

Arguments

x A orbital object.

Details

This function is mostly going to be used for **Dots Injection**. See examples for use cases.

Value

a list of quosures.

Examples

```
library(workflows)
library(recipes)
library(parsnip)

rec_spec <- recipe(mpg ~ ., data = mtcars) %>%
  step_normalize(all_numeric_predictors())

lm_spec <- linear_reg()

wf_spec <- workflow(rec_spec, lm_spec)

wf_fit <- fit(wf_spec, mtcars)

orbital_obj <- orbital(wf_fit)

library(dplyr)

mtcars %>%
  mutate(!!!orbital_inline(orbital_obj))
```

orbital_json_read *Read orbital json file*

Description

Read orbital json file

Usage

```
orbital_json_read(path)
```

Arguments

path file on disk.

Value

A orbital object

See Also

[orbital_json_write\(\)](#)

Examples

```
library(workflows)
library(recipes)
library(parsnip)

rec_spec <- recipe(mpg ~ ., data = mtcars) %>%
  step_normalize(all_numeric_predictors())

lm_spec <- linear_reg()

wf_spec <- workflow(rec_spec, lm_spec)

wf_fit <- fit(wf_spec, mtcars)

orbital_obj <- orbital(wf_fit)

tmp_file <- tempfile()

orbital_json_write(orbital_obj, tmp_file)

orbital_json_read(tmp_file)
```

`orbital_json_write` *Save as json file*

Description

Save as json file

Usage

```
orbital_json_write(x, path)
```

Arguments

x A orbital object.
path file on disk.

Value

nothing.

See Also

[orbital_json_read\(\)](#)

Examples

```
library(workflows)
library(recipes)
library(parsnip)

rec_spec <- recipe(mpg ~ ., data = mtcars) %>%
  step_normalize(all_numeric_predictors())

lm_spec <- linear_reg()

wf_spec <- workflow(rec_spec, lm_spec)

wf_fit <- fit(wf_spec, mtcars)

orbital_obj <- orbital(wf_fit)

tmp_file <- tempfile()

orbital_json_write(orbital_obj, tmp_file)

readLines(tmp_file)
```

orbital_predict	<i>Use orbital in a mutate way</i>
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Description

Use orbital in a mutate way

Use orbital in a mutate way

Usage

```
orbital_predict(.data, x)
```

```
orbital_predict(.data, x)
```

Arguments

`.data` A data frame that can be used with mutate.

`x` A orbital object.

Value

A modified data frame.

A modified data frame.

Examples

```
library(workflows)
library(recipes)
library(parsnip)

rec_spec <- recipe(mpg ~ ., data = mtcars) %>%
  step_normalize(all_numeric_predictors())

lm_spec <- linear_reg()

wf_spec <- workflow(rec_spec, lm_spec)

wf_fit <- fit(wf_spec, mtcars)

orbital_obj <- orbital(wf_fit)

mtcars %>%
  orbital_predict(orbital_obj)

library(workflows)
library(recipes)
library(parsnip)

rec_spec <- recipe(mpg ~ ., data = mtcars) %>%
  step_normalize(all_numeric_predictors())

lm_spec <- linear_reg()

wf_spec <- workflow(rec_spec, lm_spec)

wf_fit <- fit(wf_spec, mtcars)

orbital_obj <- orbital(wf_fit)

mtcars %>%
  orbital_predict(orbital_obj)
```

orbital_sql

Convert to SQL code

Description

Convert to SQL code

Usage

```
orbital_sql(x, con)
```

Arguments

x	A orbital object.
con	A connection object.

Value

SQL code.

Examples

```
library(workflows)
library(recipes)
library(parsnip)

rec_spec <- recipe(mpg ~ ., data = mtcars) %>%
  step_normalize(all_numeric_predictors())

lm_spec <- linear_reg()

wf_spec <- workflow(rec_spec, lm_spec)

wf_fit <- fit(wf_spec, mtcars)

orbital_obj <- orbital(wf_fit)

library(dbplyr)
con <- simulate_dbi()

orbital_sql(orbital_obj, con)
```

to_r_fun

Turn orbital object into a R function

Description

Turn orbital object into a R function

Usage

```
to_r_fun(x, name = "orbital_predict", file)
```


Arguments

<code>x</code>	A orbital object.
<code>name</code>	Name of created function. Defaults to "orbital_predict".
<code>file</code>	A file name.

Value

A orbital object.

Examples

```
library(workflows)
library(recipes)
library(parsnip)

rec_spec <- recipe(mpg ~ ., data = mtcars) %>%
  step_normalize(all_numeric_predictors())

lm_spec <- linear_reg()

wf_spec <- workflow(rec_spec, lm_spec)

wf_fit <- fit(wf_spec, mtcars)

orbital_obj <- orbital(wf_fit)

file_name <- tempfile()

to_r_fun(orbital_obj, file = file_name)

readLines(file_name)
```

Index

orbital, [2](#)
orbital_dt, [3](#)
orbital_inline, [3](#)
orbital_json_read, [4](#)
orbital_json_read(), [6](#)
orbital_json_write, [5](#)
orbital_json_write(), [5](#)
orbital_predict, [6](#)
orbital_sql, [7](#)

to_r_fun, [8](#)