Package: mrap (via r-universe)

May 7, 2026

Title Machine-Readable Data Analysis Results with Function Wrappers

Version 1.0.1

Description You can use the set of wrappers for analytical schemata to reduce the effort in writing machine-readable data. The set of all-in-one wrappers will cover widely used functions from data analysis packages.

License MIT + file LICENSE

Encoding UTF-8

RoxygenNote 7.2.3

URL https://gitlab.com/TIBHannover/lki/knowledge-loom/mrap-r

BugReports https://gitlab.com/TIBHannover/lki/knowledge-loom/mrap-r/-/issues

Imports dtreg, jsonlite, stringr

Suggests knitr, lme4, rmarkdown, testthat (>= 3.0.0)

Config/testthat/edition 3

VignetteBuilder knitr

NeedsCompilation no

Author Olga Lezhnina [aut] (ORCID: <https://orcid.org/0000-0003-2237-7725>), Manuel Prinz [aut] (ORCID: <https://orcid.org/0000-0003-2151-4556>), Markus Stocker [aut, cre] (ORCID: <https://orcid.org/0000-0001-5492-3212>), Open Research Knowledge Graph Project and Contributors [cph]

Maintainer Markus Stocker <markus.stocker@tib.eu>

Repository https://cran.r-universe.dev

Date/Publication 2025-12-08 13:30:02 UTC

RemoteUrl https://github.com/cran/mrap

RemoteRef HEAD

RemoteSha 4a0ed4796ce36289ed2d26b88e7d671569edce22

Contents

`algorithm_evaluation` *Create an algorithm_evaluation instance*

Description

Create an algorithm_evaluation instance

Usage

```
algorithm_evaluation(code_string, input_data, named_list_results)
```

Arguments

`code_string`	A line of code as a string, or "N/A" if not given
`input_data`	A data frame, a named list, or a URL as a string
`named_list_results`	A named list with metrics and values

Value

An algorithm_evaluation instance

Examples

```
res <- list(F1= 0.46, recall = 0.51)
inst_ae <- algorithm_evaluation("N/A", "data_url", res)
```

class_discovery *Create a class_discovery instance*

Description

Create a class_discovery instance

Usage

```
class_discovery(code_string, input_data, test_results)
```

Arguments

code_string	A line of code as a string, or "N/A" if not given
input_data	A data frame, a named list, or a URL as a string
test_results	A data frame or a list of data frames

Value

A class_discovery instance

Examples

```
clust_data <- iris[-5]
res <- data.frame(result_1 = 1, result_2 = 2)
inst_cd <- class_discovery(
"stats::kmeans(clust_data, 3)",
iris,
res
)
```

class_prediction *Create a class_prediction instance*

Description

Create a class_prediction instance

Usage

```
class_prediction(code_string, input_data, test_results)
```

Arguments

code_string	A line of code as a string, or "N/A" if not given
input_data	A data frame, a named list, or a URL as a string
test_results	A data frame or a list of data frames

Value

A class_prediction instance

Examples

```
res <- data.frame(result_1 = 1, result_2 = 2)
inst_cp <- class_prediction(
"stats::glm(Species ~ Petal.Width + Petal.Length, family='binomial', iris)",
iris,
res
)
```

`correlation_analysis` *Create a correlation_analysis instance*

Description

Create a correlation_analysis instance

Usage

```
correlation_analysis(code_string, input_data, test_results)
```

Arguments

`code_string`	A line of code as a string, or "N/A" if not given
`input_data`	A data frame, a named list, or a URL as a string
`test_results`	A data frame or a list of data frames

Value

A correlation_analysis instance

Examples

```
res <- data.frame(result_1 = 1, result_2 = 2)
inst_ca <- correlation_analysis(
"stats::cor.test(iris$Petal.Length, iris$Sepal.Length)",
iris,
res
)
```

data_analysis *Create a data_analysis instance*

Description

Create a data_analysis instance

Usage

```
data_analysis(instances, code_reference = NULL)
```

Arguments

instances	Analytic instance or a list of instances
code_reference	A URL of the code implementing data analysis

Value

A data analysis instance

Examples

```
res <- data.frame(mean = 3.758)
inst_ds <- descriptive_statistics(
"base::mean(iris$Petal.Length)",
iris,
res
)
inst_da <- data_analysis(inst_ds)
```

descriptive_statistics *Create a descriptive_statistics instance*

Description

Create a descriptive_statistics instance

Usage

```
descriptive_statistics(code_string, input_data, test_results)
```

Arguments

code_string	A line of code as a string, or "N/A" if not given
input_data	A data frame, a named list, or a URL as a string
test_results	A data frame or a list of data frames

Value

A descriptive_statistics instance

Examples

```
res <- data.frame(mean = 3.758)
inst_ds <- descriptive_statistics(
"base::mean(iris$Petal.Length)",
iris,
res
)
```

`factor_analysis` *Create a factor_analysis instance*

Description

Create a factor_analysis instance

Usage

```
factor_analysis(code_string, input_data, test_results)
```

Arguments

`code_string`	A line of code as a string, or "N/A" if not given
`input_data`	A data frame, a named list, or a URL as a string
`test_results`	A data frame or a list of data frames

Value

A factor_analysis instance

Examples

```
fa_data <- iris[-5]
res <- data.frame(result_1 = 1, result_2 = 2)
inst_fa <- factor_analysis(
"stats::princomp(fa_data)",
iris,
res
)
```

group_comparison *Create a group_comparison instance*

Description

Create a group_comparison instance

Usage

```
group_comparison(code_string, input_data, test_results)
```

Arguments

code_string	A line of code as a string, or "N/A" if not given
input_data	A data frame, a named list, or a URL as a string
test_results	A data frame or a list of data frames

Value

A group_comparison instance

Examples

```
res <- data.frame(result_1 = 1, result_2 = 2)
inst_gc <- group_comparison(
"stats::aov(Petal.Length ~ Species, data = iris)",
iris,
res
)
```

multilevel_analysis *Create a multilevel_analysis instance*

Description

Create a multilevel_analysis instance

Usage

```
multilevel_analysis(code_string, input_data, test_results)
```

Arguments

code_string	A line of code as a string, or "N/A" if not given
input_data	A data frame, a named list, or a URL as a string
test_results	A data frame or a list of data frames

Value

A multilevel_analysis instance

Examples

```
code_string <- "lme4::lmer(math ~ homework + (1 | schid))"
res <- data.frame(result_1 = 1, result_2 = 2)
inst <- multilevel_analysis(code_string, "data_url", res)
```

---

regression_analysis *Create a regression_analysis instance*

Description

Create a regression_analysis instance

Usage

```
regression_analysis(code_string, input_data, test_results)
```

Arguments

code_string	A line of code as a string, or "N/A" if not given
input_data	A data frame, a named list, or a URL as a string
test_results	A data frame or a list of data frames

Value

A regression_analysis instance

Examples

```
res <- data.frame(result_1 = 1, result_2 = 2)
inst_ra <- regression_analysis(
"stats::lm(Petal.Length ~ Sepal.Length, data = iris)",
iris,
res
)
```

stats_aov *Wrap stats::aov function*

Description

Wrap stats::aov function

Usage

```
stats_aov(...)
```

Arguments

...	the same arguments as in the wrapped function

Value

a list of ANOVA object and R6 class instance

Examples

```
results <- stats_aov(Petal.Length ~ Species, data = iris)
```

to_jsonld *Write an instance in JSON-LD format*

Description

This function is imported from dtreg for ease-of-use

Usage

```
to_jsonld(instance)
```

Arguments

instance	An instance of an R6 class

Value

JSON string in JSON-LD format

Examples

```
res <- data.frame(mean = 3.758)
inst_ds <- descriptive_statistics(
"base::mean(iris$Petal.Length)",
iris,
res
)
json <- to_jsonld(inst_ds)
```

Index