Package 'ife'

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Type Package

Title Autodiff for Influence Function Based Estimates

Version 0.2.3

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Description Implements an S7 class for estimates based on influence functions, with forward mode automatic differentiation defined for standard arithmetic operations.

License GPL (>= 3)

Encoding UTF-8

URL https://github.com/nt-williams/ife

BugReports https://github.com/nt-williams/ife/issues

Imports cli, collapse, generics, S7 (>= 0.2.0)

RoxygenNote 7.3.2

Suggests testthat (>= 3.0.0)

Config/testthat/edition 3

NeedsCompilation no

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Repository CRAN

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`ife` *Create a new 'influence_func_estimate' object*

Description

Create a new 'influence_func_estimate' object

Usage

```
ife(
  x,
  eif,
  weights = rep(1, length(eif)),
  id = as.character(1:length(eif)),
  critical_value = qnorm(0.975)
)

influence_func_estimate(
  x,
  eif,
  weights = rep(1, length(eif)),
  id = as.character(1:length(eif)),
  critical_value = qnorm(0.975)
)
```

Arguments

`x`	[`numeric(1)`] The estimate.
`eif`	[`numeric(n)`] The influence function.
`weights`	[`numeric(n)`] Optional sampling weights.
`id`	[`character(n)`] Optional cluster identifiers.
`critical_value`	[`numeric(1)`] Optional critical value for constructing confidence interval.

Value

An 'S7' object of class `influence_func_estimate`.

Examples

```
x <- influence_func_estimate(5, runif(10))
y <- ife(5, runif(10))
x + y
x + 1
1 - y
x / y
x * y
tidy(x)
# Example: Confidence interval for a variance estimate
x <- rnorm(100, 0, 2)
ife(mean(x^2), x^2 - mean(x^2)) - ife(mean(x), x - mean(x))^2
```

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