Package: modelfactory (via r-universe)

September 1, 2024

Title Combine Statistical Models into a Tibble for Comparison

Version 1.0.0.9000

Description Statisticians often want to compare the fit of different models on the same data set. However, this usually involves a lot of manual code to fish items out of summary() or plain model objects. 'modelfactory' offers the capability to pass multiple models in and get out metrics or coefficients for quick comparison with easy-to-remember syntax.

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Encoding UTF-8

Roxygen list(markdown = TRUE)

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Suggests testthat (>= 3.0.0), lme4, Matrix (>= 1.6-5)

Config/testthat/edition 3

Imports dplyr, stats, tibble

URL `https://willtirone.github.io/modelfactory/`, `https://github.com/WillTirone/modelfactory`

BugReports `https://github.com/WillTirone/modelfactory/issues`

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

RemoteUrl https://github.com/willtirone/modelfactory

RemoteRef HEAD

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Contents

stack_coeff *Stack coefficents, confidence intervals, and standard errors for n models.*

Description

`stack_coeff()` takes several lm or glm models, pulls out their coefficients, standard errors, and confidence intervals, and stacks everything into a `tibble()` for easy comparison across models.

Usage

```
stack_coeff(..., ci = 0.95)
```

Arguments

`...`	lm or glm models to summarize and combine.
`ci`	width of confidence, default = 0.95.

Value

A `tibble()` with coefficients, confidence intervals, and standard errors.

Examples

```
# multiple lm example ----------------------------------
lm_1 = lm(mpg ~ cyl + disp + hp, data = mtcars)
lm_2 = lm(mpg ~ hp + drat + wt, data = mtcars)
lm_3 = lm(mpg ~ ., data = mtcars)
lm_combined = stack_coeff(lm_1, lm_2, lm_3)
lm_combined

# sometimes you might just want 1 model's summary ------
single_lm = stack_coeff(lm_1)
single_lm

# glm example ------------------------------------------
glm_1 = glm(vs ~ drat + hp, data = mtcars)
glm_2 = glm(vs ~ wt + qsec, data = mtcars)
glm_3 = glm(vs ~ ., data = mtcars)
glm_combined = stack_coeff(glm_1, glm_2, glm_3)
glm_combined
```

stack_metrics — *Combine model metrics for n number of lm, glm, and lmer models*

Description

`stack_metrics()` calculates basic model metrics like MSE for the models passed in, then stacks them in a dataframe for comparison. This supports lm, glm, and lmer models, and different metrics are calculated for each. This does not perform model selection based on a given criteria, but it makes the tedious task of, say, comparing R-squared across several models very easy.

Usage

```
stack_metrics(...)
```

Arguments

`...`	lm, glm, or lmer models to summarize and combine.

Value

A `tibble()` that includes a variety of evaluation metrics.

Examples

```
# lm example -------------------------------------------
lm_1 = lm(mpg ~ cyl + disp + hp, data = mtcars)
lm_2 = lm(mpg ~ hp + drat + wt, data = mtcars)
lm_3 = lm(mpg ~ ., data = mtcars)
lm_combined = stack_metrics(lm_1, lm_2, lm_3)
lm_combined

# glm example ------------------------------------------
glm_1 = glm(vs ~ drat + hp, data = mtcars)
glm_2 = glm(vs ~ wt + qsec, data = mtcars)
glm_3 = glm(vs ~ ., data = mtcars)
glm_combined = stack_metrics(glm_1, glm_2, glm_3)
glm_combined

# lme4 example -----------------------------------------
lmer_1 = lme4::lmer(Sepal.Length ~ (1 | Species), data = iris)
lmer_2 = lme4::lmer(Sepal.Length ~ (1 | Species) + Petal.Length, data = iris)
lmer_combined = stack_metrics(lmer_1, lmer_2)
lmer_combined
```

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