

Package: latexr (via r-universe)

October 1, 2026

Title Translate 'LaTeX' Formulas to R Code

Version 0.3.0

Description Implements a minimal 'LaTeX' parser that translates mathematical formulas into R code strings. Supports arithmetic operators, implicit multiplication, fractions, Greek letters, common mathematical functions, and statistical notation for means, medians, and rolling sums. Input from visual formula editors such as 'MathQuill' is normalized automatically, and the resulting string can be evaluated with `parse()` and `eval()`, or converted into an R function with `latex2fun()`. The implementation follows the tree-walking interpreter design of Nystrom (2021) <<https://craftinginterpreters.com/>>.

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Encoding UTF-8

Roxygen list(markdown = TRUE)

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Imports R6 (>= 2.4.0), purrr (>= 0.3.0)

Suggests testthat

URL <https://github.com/rodrigoesborges/latexr>

BugReports <https://github.com/rodrigoesborges/latexr/issues>

Repository <https://rodrigoesborges.r-universe.dev>

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latex2ast	<i>Extract the AST of a LaTeX formula.</i>
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Description

Runs the same scanning and parsing pipeline used by `latex2r()`, but returns the parsed abstract syntax tree instead of the R translation. Useful for debugging formulas and for tooling that wants to inspect the structure recognized by the parser.

Usage

```
latex2ast(x)
```

Arguments

x string

Value

An Expr object, or NULL (invisibly) when the formula can't be scanned.

Examples

```
latex2ast("\\beta_1^{2}")
```

latex2fun	<i>Construct R function from LaTeX expression.</i>
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Description

Construct R function from LaTeX expression.

Usage

```
latex2fun(latex_string, envir = parent.frame(), na.rm = FALSE)
```

Arguments

latex_string string
envir environment
na.rm boolean; when TRUE, calls to mean() and median() are emitted with na.rm = TRUE.

Value

function

Examples

```
x = seq(-2 * pi, 2 * pi, length.out = 500)
f = latex2fun("\\sin{x * a}")
f_x = f(x = x, a = 2)
plot(x, f_x, type = "l")
```

latex2r

Translate LaTeX formula to R code.

Description

Take a LaTeX formula and attempts to find an equivalent representation in R. If `interactive=TRUE` it pops up an interactive REPL that does the same, but interactively.

Usage

```
latex2r(x, interactive = FALSE, na.rm = FALSE)
```

Arguments

<code>x</code>	string
<code>interactive</code>	boolean
<code>na.rm</code>	boolean; when <code>TRUE</code> , calls to <code>mean()</code> and <code>median()</code> are emitted with <code>na.rm = TRUE</code> .

Value

string

Examples

```
latex2r("\\beta_1^{\\frac{x+1}{x^2 \\cdot y}}")
latex2r("\\bar{x}", na.rm = TRUE)
```

normalize_mathquill	<i>Normalize Unicode characters to their LaTeX equivalents.</i>
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Description

Converts the Unicode characters commonly emitted by visual formula editors (MathQuill, embedded in many learning platforms) or by plain keyboard input into the LaTeX commands understood by `latex2r()`.

Usage

```
normalize_mathquill(x)
```

Arguments

x	string
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Details

Minus signs and dashes become `-`, the multiplication and division symbols become `\times`, `\cdot` and `/`, Greek letters become the corresponding LaTeX commands, and accented vowels become `\bar{}`, `\tilde{}` or `\hat{}` (or their base letter when the accent has no meaning here).

This function is applied automatically by `latex2r()` before scanning, but it is exported so callers can inspect the normalized version of a formula.

Value

string

Examples

```
normalize_mathquill("x")
```

print.Token	<i>Print a Token object.</i>
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Description

Print a Token object.

Usage

```
## S3 method for class 'Token'
print(x, ...)
```

print.Token

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Arguments

- x A Token object.
- ... Further arguments passed to or from other methods.

Value

The string representation of the token, invisibly.

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