

Package ‘mathjaxr’

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Title Using 'Mathjax' in Rd Files

Description Provides 'MathJax' and macros to enable its use within Rd files for rendering equations in the HTML help files.

License GPL-3

Encoding UTF-8

URL <https://github.com/wwiechtb/mathjaxr>

BugReports <https://github.com/wwiechtb/mathjaxr/issues>

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mathjaxr-package	<i>Using MathJax in Rd Files</i>
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Description

The **mathjaxr** package allows for easy inclusion of **MathJax** equations in Rd files. Package authors wanting to make use of the package and its functionality need to:

1. install the **mathjaxr** package,
2. add mathjaxr to Suggests or Imports in the ‘DESCRIPTION’ file of their package,
3. add mathjaxr to RdMacros in the ‘DESCRIPTION’ file of their package (or add RdMacros: mathjaxr if the ‘DESCRIPTION’ file does not yet contain a RdMacros entry)

One can then enable the use of MathJax by calling the `\loadmathjax` macro (that is provided by the **mathjaxr** package) within the `\description{}` section of an `.Rd` file.

An inline equation can then be added with the `\mjeqn{latex}{ascii}` macro, with the \LaTeX commands for the equation given between the first set of curly brackets (which will be rendered in the HTML and PDF help pages) and the plain-text version of the equation given between the second set of curly brackets (which will be shown in the plain text help). With the `\mjdeqn{latex}{ascii}` macro, one can add ‘displayed equations’ (as in \LaTeX ’s `displaymath` environment). Single argument versions of these macros, namely `\mjseqn{latexascii}` and `\mjsdeqn{latexascii}`, are also available.

Details

The Javascript code for MathJax is contained in this package. If a user viewing a help page has **mathjaxr** installed, it will be retrieved from there, otherwise it will be retrieved from the CDN site <https://cdn.jsdelivr.net/npm/mathjax@3/es5/tex-chtml-full.js>. To force use of the CDN site, the user can set the environment variable `MATHJAXR.USECDN` to any non-blank value.

Package authors who want to ensure that users can see the rendered equations in the HTML help pages also when offline should add **mathjaxr** to Imports.

Issues

Care must be taken when using the less-than and greater-than symbols in equations as these might get interpreted by the browser as HTML tags. See [here](#) for further details. Adding space around these symbols should solve this problem (i.e., instead of writing `\mjseqn{i<j}`, write `\mjseqn{i < j}`). Do not use the `\lt` and `\gt` macros provided by MathJax as these will cause problems when rendering the PDF help pages.

Example

The probability density function of a normal distribution is given by

$$f(x) = \frac{1}{\sqrt{2\pi}\sigma} e^{-\frac{1}{2}\left(\frac{x-\mu}{\sigma}\right)^2},$$

where μ denotes the mean of the distribution and σ its standard deviation.

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