

Package: RcppNLOptExample (via r-universe)

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Type Package

Title 'Rcpp' Package Illustrating Header-Only Access to 'NLOpt'

Version 0.0.2.2

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Description An example package which shows use of 'NLOpt' functionality from C++ via 'Rcpp' without requiring linking, and relying just on 'nloptr' thanks to the exporting API added there by Jelmer Ypma. This package is a fully functioning, updated, and expanded version of the initial example by Julien Chiquet at <https://github.com/jchiquet/RcppArmadilloNLOptExample> also containing a large earlier pull request of mine.

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Encoding UTF-8

LinkingTo Rcpp, nloptr (>= 1.2.0), tl, rspdlite

Imports Rcpp, nloptr (>= 1.2.0), tl (>= 0.0.2), utils

Depends R (>= 3.0.2)

URL <https://github.com/eddelbuettel/rcppnloptexample>,
<https://dirk.eddelbuettel.com/code/rcpp.nloptexample.html>

BugReports <https://github.com/eddelbuettel/rcppnloptexample/issues>

Config/pak/sysreqs cmake

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

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nloptVersion	<i>NLopt Version as Vector</i>
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Description

NLopt Version as Vector

Usage

nloptVersion()

Value

A list with an integer vector with three elements for major, minor and patch release, classed as package_version and numeric_version.

Examples

nloptVersion()

testProblem	<i>NLopt Call Example from Rcpp</i>
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Description

A simple example for for NLopt integration for Rcpp, using an example from the NLopt tutorial.

Usage

testProblem(method = "MMA", verbose = FALSE)

Arguments

- | | |
|---------|--|
| method | A string defaulting to ‘MMA’ (also allowing ‘COBYLA’) which selects the algorithm use. |
| verbose | A boolean toggle defaulting to ‘false’ |

Details

This function illustrates use of **NLopt** from R without requiring linking. It relies on the set of exported functions the **nloptr** R package provides directly (and also instantiates) using a method described in *Writing R Extensions*. There is also a C++ interface to **NLopt** but it requires linking making use from another R package a little more involved as presence and location of the **NLopt** library may need to be checked (though using **pkgconf** can help).

Value

A numeric vector with two elements

See Also

https://nlopt.readthedocs.io/en/latest/NLopt_Tutorial/

Examples

```
testProblem("MMA", TRUE)
```

wrapper	<i>Minimal wrapper function</i>
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Description

Minimal wrapper for C++ function to illustrate logging from R

Usage

```
wrapper(method = "MMA")
```

Arguments

method	A string defaulting to ‘MMA’ (also allowing ‘COBYLA’) which selects the algorithm use.
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Value

Nothing is returned as the function is invoked for its side effects.

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