

# Package ‘RcppCGAL’

July 5, 2024

**Type** Package

**Title** 'Rcpp' Integration for 'CGAL'

**Version** 5.6.4

**Date** 2024-07-04

**Description** Creates a header only package to link to the 'CGAL' (Computational Geometry Algorithms Library) header files in 'Rcpp'. There are a variety of potential uses for the software such as Hilbert sorting, K-D Tree nearest neighbors, and convex hull algorithms. For more information about how to use the header files, see the 'CGAL' documentation at <https://www.cgal.org>. Currently downloads version 5.6.1 of the 'CGAL' header files.

**License** GPL-3

**Imports** Rcpp, utils

**Suggests** knitr, rmarkdown, spelling, testthat (>= 3.0.0)

**BugReports** <https://github.com/ericdunipace/RcppCGAL/issues>

**NeedsCompilation** no

**RoxygenNote** 7.3.1

**Encoding** UTF-8

**VignetteBuilder** knitr

**Biarch** TRUE

**Language** en-US

**URL** <https://github.com/ericdunipace/RcppCGAL>

**Config/testthat/edition** 3

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RcppCGAL-package	<i>RcppCGAL: 'Rcpp' Integration for 'CGAL'</i>
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## Description

Creates a header only package to link to the 'CGAL' (Computational Geometry Algorithms Library) header files in 'Rcpp'. There are a variety of potential uses for the software such as Hilbert sorting, K-D Tree nearest neighbors, and convex hull algorithms. For more information about how to use the header files, see the 'CGAL' documentation at <https://www.cgal.org>. Currently downloads version 5.6.1 of the 'CGAL' header files.

## Author(s)

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Other contributors:

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- The CGAL Project [copyright holder]

## References

The CGAL Project. (2023). CGAL User and Reference Manual. Retrieved from <https://doc.cgal.org/latest/Manual/index.html>

## See Also

Useful links:

- <https://github.com/ericdunipace/RcppCGAL>
- Report bugs at <https://github.com/ericdunipace/RcppCGAL/issues>

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cgal_is_installed	<i>Check if CGAL header files exist in RcppCGAL package</i>
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**Description**

Check if CGAL header files exist in RcppCGAL package

**Usage**

```
cgal_is_installed()
```

**Details**

This function will perform a very simple check to see if the CGAL folder exists in the include directory and that it is non-empty. If the folder exists and is non-empty, the function returns TRUE; otherwise the function returns FALSE.

**Value**

logical value

**Examples**

```
cgal_is_installed()
```

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cgal_version	<i>Return CGAL version</i>
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**Description**

Return CGAL version

**Usage**

```
cgal_version()
```

**Value**

prints the CGAL version of the package

**Examples**

```
cgal_version()
```

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set_cgal	<i>Set the CGAL header file directory</i>
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**Description**

This package will set the CGAL\_DIR environmental variable if you don't know how. Then you can re-install the RcppCGAL package and the installation should use your preferred source of the CGAL library. Note the cleaner functions will run automatically and replace the calls to std::err and exit in the C code. They have been tested on CGAL 5.6 so are not guaranteed to work with other versions of the CGAL headers.

**Usage**

```
set_cgal(path)
```

**Arguments**

path                    character vector. either a URL or system path

**Value**

Invisibly returns TRUE if the CGAL\_DIR variable was successfully set or or FALSE if it was not.

**See Also**

[unset\\_cgal\(\)](#)

**Examples**

```
## Not run:  
set_cgal("path/to/include/CGAL")  
  
## End(Not run)
```

---

unset_cgal	<i>Unset the CGAL header file directory</i>
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**Description**

This package will remove the CGAL\_DIR environmental variable.

**Usage**

```
unset_cgal(...)
```

**Arguments**

...                    Not used at this time

**Value**

Invisibly returns TRUE if the CGAL\_DIR variable was successfully removed or FALSE if it was not.

**See Also**

[unset\\_cgal\(\)](#)

**Examples**

```
## Not run:  
unset_cgal()  
  
## End(Not run)
```

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