

# Package ‘geosmdata2’

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**Type** Package

**Title** Get data from Open Street Map

**Version** 0.1

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**Description** This package is a wrapper for some functions to access information on OpenStreetMap.

**License** GPL-2

**LazyData** TRUE

**Imports** osmar,sp

**Depends** RCurl,rjson,stringr,R(>= 2.10.0),XML

**RoxygenNote** 5.0.0

**NeedsCompilation** no

## R topics documented:

|                                |   |
|--------------------------------|---|
| CircSearch . . . . .           | 2 |
| CountNodes . . . . .           | 2 |
| extract_info_op . . . . .      | 3 |
| extract_position_op . . . . .  | 3 |
| geocode_osm . . . . .          | 4 |
| get_osm_area . . . . .         | 5 |
| get_osm_nodes . . . . .        | 5 |
| get_osm_nodes_around . . . . . | 6 |
| get_osm_relation . . . . .     | 6 |
| get_osm_ways . . . . .         | 7 |
| osm_df . . . . .               | 7 |
| plotbui . . . . .              | 8 |
| uaBerlin . . . . .             | 8 |

|              |          |
|--------------|----------|
| <b>Index</b> | <b>9</b> |
|--------------|----------|

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|            |                            |
|------------|----------------------------|
| CircSearch | <i>function CircSearch</i> |
|------------|----------------------------|

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**Description**

Performs circum search

**Usage**

```
CircSearch(what,lat,lon,radius)
```

**Arguments**

|        |             |
|--------|-------------|
| what   | Map feature |
| lat    | Latitude    |
| lon    | Longitude   |
| radius | Radius      |

**Author(s)**

Jan-Philipp Kolb <Jan-Philipp\_Kolb@gmx.net>

**References**

[http://wiki.openstreetmap.org/wiki/Overpass\\_API#Around](http://wiki.openstreetmap.org/wiki/Overpass_API#Around)

**Examples**

```
gc <- geocode_osm(place="Venice beach",output="all")
cafes_venice <- CircSearch(what="cafe",lat=gc$lat,lon=gc$lon,radius=10000)
```

---

|            |   |
|------------|---|
| CountNodes | <i>function to count nodes in an osm xml object</i> |
|------------|---|

---

**Description**

function to count nodes

**Usage**

```
CountNodes(object2)
```

**Arguments**

|         |              |
|---------|--------------|
| object2 | a xml object |
|---------|--------------|

**Author(s)**

Jan-Philipp Kolb <Jan-Philipp\_Kolb@gmx.net>

**Examples**

```
ambulance_station <- get_osm_nodes(object2="ambulance_station",place="Berlin")
CountNodes(ambulance_station)
```

---

|                 |                                 |
|-----------------|---------------------------------|
| extract_info_op | <i>function extract_info_op</i> |
|-----------------|---------------------------------|

---

**Description**

Extract information from OpenStreetMap object

**Usage**

```
extract_info_op(OSM.Data,value)
```

**Arguments**

|          |                |
|----------|----------------|
| OSM.Data | an osm object. |
| value    | a map feature. |

**Value**

.

**Author(s)**

Jan-Philipp Kolb <Jan-Philipp\_Kolb@gmx.net>

**Examples**

```
schools <- get_osm_nodes(object2="school",place="Meppen")
info <- extract_info_op(OSM.Data=schools,value="school")
```

---

|                     |                                     |
|---------------------|-------------------------------------|
| extract_position_op | <i>function extract_position_op</i> |
|---------------------|-------------------------------------|

---

**Description**

Extract position from OpenStreetMap object

**Usage**

```
extract_position_op(OSM.Data,value)
```

**Arguments**

|          |                |
|----------|----------------|
| OSM.Data | an osm object. |
| value    | a map feature. |

**Value**

.

**Author(s)**

Jan-Philipp Kolb <Jan-Philipp\_Kolb@gmx.net>

**Examples**

```
bikeways <- get_osm_ways(object2="cycleway",place="San Francisco")
info <- extract_position_op(OSM.Data=bikeways,value="cycleway")
```

---

geocode\_osm

*function geocode\_osm*

---

**Description**

Returns info from <http://nominatim.openstreetmap.org/>

**Usage**

```
geocode_osm(place,output)
```

**Arguments**

|        |                                     |
|--------|-------------------------------------|
| place  | Place which should be geocoded      |
| output | Complete result or just the geocode |

**Author(s)**

Jan-Philipp Kolb <Jan-Philipp\_Kolb@gmx.net>

**References**

<https://github.com/malexan/nominatim/blob/master/geocode.r>

**Examples**

```
geocode_osm(place="Mannheim B2,1")
```

---

|              |                              |
|--------------|------------------------------|
| get_osm_area | <i>function get_osm_area</i> |
|--------------|------------------------------|

---

**Description**

Returns info on ways from <http://www.overpass-api.de/api/>

**Usage**

```
get_osm_area(object2,place)
```

**Arguments**

|         |   |
|---------|---|
| object2 | Value for map feature you are searching for |
| place   | Place for the map features                  |

**Author(s)**

Jan-Philipp Kolb <Jan-Philipp\_Kolb@gmx.net>

**Examples**

```
roads <- get_osm_area(object2="pedestrian",place="Rom")
```

---

|               |                               |
|---------------|-------------------------------|
| get_osm_nodes | <i>function get_osm_nodes</i> |
|---------------|-------------------------------|

---

**Description**

Returns info on nodes from <http://www.overpass-api.de/api/>

**Usage**

```
get_osm_nodes(object2,place)
```

**Arguments**

|         |   |
|---------|---|
| object2 | Value for map feature you are searching for |
| place   | Place for the map features                  |

**Author(s)**

Jan-Philipp Kolb <Jan-Philipp\_Kolb@gmx.net>

**See Also**

[get\\_osm\\_relation](#), <http://www.r-project.org>

**Examples**

```
cafes <- get_osm_nodes("cafe",place="Emeryville")  
# brewery <- get_osm_nodes("brewery",place="Ingolstadt")
```

---

get\_osm\_nodes\_around    *function get\_osm\_nodes\_around*

---

**Description**

Returns info on nodes from <http://www.overpass-api.de/api/>

**Usage**

```
get_osm_nodes_around(place, radius)
```

**Arguments**

|        |                     |
|--------|---------------------|
| place  | Point or place      |
| radius | radius around point |

**Author(s)**

Jan-Philipp Kolb <Jan-Philipp\_Kolb@gmx.net>

**See Also**

[get\\_osm\\_nodes](#), <http://www.r-project.org>

**Examples**

```
info <- get_osm_nodes_around("Mannheim", radius=5)
```

---

get\_osm\_relation    *function get\_osm\_relation*

---

**Description**

Returns info on nodes from <http://www.overpass-api.de/api/>

**Usage**

```
get_osm_relation(object2, place)
```

**Arguments**

|         |   |
|---------|---|
| object2 | Value for map feature you are searching for |
| place   | Place for the map features                  |

**Author(s)**

Jan-Philipp Kolb <Jan-Philipp\_Kolb@gmx.net>

**Examples**

```
bike_routes <- get_osm_relation(object2="bicycle", place="Mannheim")
```

---

|              |                              |
|--------------|------------------------------|
| get_osm_ways | <i>function get_osm_ways</i> |
|--------------|------------------------------|

---

**Description**

Returns info on ways from <http://www.overpass-api.de/api/>

**Usage**

```
get_osm_ways(object2,place)
```

**Arguments**

|         |   |
|---------|---|
| object2 | Value for map feature you are searching for |
| place   | Place for the map features                  |

**Author(s)**

Jan-Philipp Kolb <Jan-Philipp\_Kolb@gmx.net>

**Examples**

```
# roads <- get_osm_ways(object2="secondary",place="Sandhofen")
bike_routes <- get_osm_ways(object2="cycleway",place="Berkeley")
```

---

|        |  |
|--------|--|
| osm_df | <i>data frame map features OpenStreetMap</i> |
|--------|--|

---

**Description**

Overview of all available map features at OpenStreetMap [http://wiki.openstreetmap.org/wiki/Map\\_Features](http://wiki.openstreetmap.org/wiki/Map_Features)

**Usage**

```
data(osm_df)
```

**Author(s)**

Jan-Philipp Kolb <Jan-Philipp\_Kolb@gmx.net>

**Examples**

```
data(osm_df)
```

---

|         |                         |
|---------|-------------------------|
| plotbui | <i>function plotbui</i> |
|---------|-------------------------|

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**Description**

Converts osmar object in polygons

**Usage**

```
plotbui(ua)
```

**Arguments**

ua                      the osmar file which the polygons are to be read from.

**Value**

an instance of `get_osm`.

**Author(s)**

Jan-Philipp Kolb <Jan-Philipp\_Kolb@gmx.net>

**Examples**

```
data("uaBerlin")
pol_Berlin <- plotbui(uaBerlin)
```

---

|          |                         |
|----------|-------------------------|
| uaBerlin | <i>Dataset uaBerlin</i> |
|----------|-------------------------|

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**Description**

Is the result of a download of OSM data using the osmar project

**Usage**

```
data("uaBerlin")
```

**Author(s)**

Jan-Philipp Kolb <Jan-Philipp\_Kolb@gmx.net>

**Examples**

```
data("uaBerlin")
```



# Index

CircSearch, [2](#)

CountNodes, [2](#)

extract\_info\_op, [3](#)

extract\_position\_op, [3](#)

geocode\_osm, [4](#)

get\_osm\_area, [5](#)

get\_osm\_nodes, [5](#), [6](#)

get\_osm\_nodes\_around, [6](#)

get\_osm\_relation, [5](#), [6](#)

get\_osm\_ways, [7](#)

osm\_df, [7](#)

plotbui, [8](#)

uaBerlin, [8](#)