

Package ‘leafpm’

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Title Leaflet Map Plugin for Drawing and Editing

Description A collection of tools for interactive manipulation of (spatial) data layers on leaflet web maps. Tools include editing of existing layers, creation of new layers through drawing of shapes (points, lines, polygons), deletion of shapes as well as cutting holes into existing shapes. Provides control over options to e.g. prevent self-intersection of polygons and lines or to enable/disable snapping to align shapes.

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URL <https://github.com/r-spatial/leafpm>

BugReports <https://github.com/r-spatial/leafpm/issues>

Encoding UTF-8

LazyData true

ByteCompile true

RoxygenNote 6.1.1

Depends R (>= 3.1.0)

Imports dplyr, htmltools (>= 0.3), htmlwidgets, jsonlite, leaflet (>= 2.0.1), sf (>= 0.5-2),

Enhances geojsonio, mapedit, mapview, shiny

Suggests testthat

NeedsCompilation no

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Repository CRAN

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| | |
|--------------|---|
| addPmToolbar | <i>Add 'leaflet-pm' Toolbar to a Leaflet 'htmlwidget'</i> |
|--------------|---|

Description

Add 'leaflet-pm' Toolbar to a Leaflet 'htmlwidget'

Usage

```
addPmToolbar(map = NULL, targetLayerId = NULL, targetGroup = NULL,
  toolbarOptions = pmToolbarOptions(), drawOptions = pmDrawOptions(),
  editOptions = pmEditOptions(), cutOptions = pmCutOptions())
```

Arguments

| | |
|----------------|---|
| map | leaflet map htmlwidget to which the toolbar should be added |
| targetLayerId | string id of the feature to edit |
| targetGroup | string name of the group to edit |
| toolbarOptions | pmToolbarOptions |
| drawOptions | pmDrawOptions |
| editOptions | pmEditOptions |
| cutOptions | pmCutOptions |

Value

leaflet htmlwidget

Examples

```
if(interactive()) {
  library(leaflet)
  library(leafpm)

  # quick example
  leaflet() %>%
```

```

    addTiles() %>%
    addPmToolbar()

# customizing with options
leaflet() %>%
  addTiles() %>%
  addPmToolbar(
    toolbarOptions = pmToolbarOptions(drawMarker = FALSE, position = "topright"),
    drawOptions = pmDrawOptions(snappable = FALSE, allowSelfIntersection = FALSE),
    editOptions = pmEditOptions(preventMarkerRemoval = TRUE, draggable = FALSE),
    cutOptions = pmCutOptions(snappable = FALSE, allowSelfIntersection = FALSE)
  )

# demonstrate that leaflet.pm can work with holes
library(sf)
library(leaflet)
library(leafpm)

outer1 = matrix(c(0,0,10,0,10,10,0,10,0,0),ncol=2, byrow=TRUE)
hole1 = matrix(c(1,1,1,2,2,2,2,1,1,1),ncol=2, byrow=TRUE)
hole2 = matrix(c(5,5,5,6,6,6,6,5,5,5),ncol=2, byrow=TRUE)
outer2 = matrix(c(11,0,11,1,1,12,1,12,0,11,0),ncol=2, byrow=TRUE)

pts1 = list(outer1, hole1, hole2)
pts2 = list(outer2)

p11 = st_sf(geom = st_sfc(st_polygon(pts1)))
p12 = st_sf(geom = st_sfc(st_polygon(pts2)))

mpl = st_sf(geom = st_combine(rbind(p11, p12)))

if(requireNamespace("mapview")) {
  mapview::mapview(mpl)@map %>%
    addPmToolbar(targetGroup = "mpl", cutOptions = pmCutOptions(snappable = FALSE))
} else {
  warning("Please install mapview to run this example", call. = FALSE)
}
}

```

pmCutOptions

Set Options for 'leaflet.pm' Cut Mode

Description

Set Options for 'leaflet.pm' Cut Mode

Usage

```
pmCutOptions(snappable = FALSE, allowSelfIntersection = TRUE,
             cursorMarker = FALSE)
```

Arguments

snappable logical to snap while drawing. Default is TRUE.
allowSelfIntersection logical to allow self-intersection. Default is TRUE.
cursorMarker logical to show a marker at the cursor. Default is TRUE.

Value

list of options

| | |
|----------------|--------------------------------------|
| pmDependencies | <i>Dependencies for 'leaflet-pm'</i> |
|----------------|--------------------------------------|

Description

Dependencies for 'leaflet-pm'

Usage

```
pmDependencies()
```

Value

htmltools::htmlDependency

| | |
|---------------|---|
| pmDrawOptions | <i>Set Options for 'leaflet.pm' Draw Mode</i> |
|---------------|---|

Description

Set Options for 'leaflet.pm' Draw Mode

Usage

```
pmDrawOptions(snappable = TRUE, snapDistance = 20, snapMiddle = TRUE,
  tooltips = TRUE, cursorMarker = TRUE, finishOn = NULL,
  allowSelfIntersection = TRUE, templineStyle = list(),
  hintlineStyle = list(color = "#3388ff", dashArray = "5,5"),
  markerStyle = list(draggable = TRUE))
```

Arguments

| | |
|-----------------------|--|
| snappable | logical to snap while drawing. Default is TRUE. |
| snapDistance | integer for the distance within which snapping will occur. Default is 20. |
| snapMiddle | logical to snap in the middle of segments. Default is TRUE. |
| tooltips | logical to show tooltips. Default is TRUE. |
| cursorMarker | logical to show a marker at the cursor. Default is TRUE. |
| finishOn | string type of layer event to finish the drawn shape. Example events are 'mouseout', 'dblclick', 'contextmenu'. Default is NULL. |
| allowSelfIntersection | logical to allow self-intersection. Default is TRUE. |
| templinestyle | list to customize the styling of the lines between coordinates and markers. |
| hintlinestyle | list to customize the styling of the line between the last marker and the cursor. |
| markerStyle | list to customize the styling of the added marker. |

Value

list of options

| | |
|---------------|---|
| pmEditOptions | <i>Set Options for 'leaflet.pm' Edit Mode</i> |
|---------------|---|

Description

Set Options for 'leaflet.pm' Edit Mode

Usage

```
pmEditOptions(snappable = TRUE, snapDistance = 20,
  allowSelfIntersection = TRUE, draggable = TRUE,
  preventMarkerRemoval = FALSE, preventVertexEdit = FALSE)
```

Arguments

| | |
|-----------------------|---|
| snappable | logical to snap while drawing. Default is TRUE. |
| snapDistance | integer for the distance within which snapping will occur. Default is 20. |
| allowSelfIntersection | logical to allow self-intersection. Default is TRUE. |
| draggable | logical make the layer draggable. Default is TRUE. |
| preventMarkerRemoval | logical to disable removal via right-click. Default is FALSE. |
| preventVertexEdit | logical to disable editing of vertices. Default is FALSE. |

Value

list of options

pmToolbarOptions *Set Options for 'leaflet.pm' Toolbar*

Description

Set Options for 'leaflet.pm' Toolbar

Usage

```
pmToolbarOptions(drawMarker = TRUE, drawPolygon = TRUE,
  drawPolyline = TRUE, drawCircle = TRUE, drawRectangle = TRUE,
  editMode = TRUE, cutPolygon = TRUE, removalMode = TRUE,
  position = "topleft")
```

Arguments

| | |
|---------------|---|
| drawMarker | logical add button to draw a marker. Default is TRUE. |
| drawPolygon | logical add button to draw a polygon. Default is TRUE. |
| drawPolyline | logical add button to draw a polyline. Default is TRUE. |
| drawCircle | logical add button to draw a circle. Default is TRUE. |
| drawRectangle | logical add button to draw a rectangle. Default is TRUE. |
| editMode | logical add button to edit features. Default is TRUE. |
| cutPolygon | logical add button to cut a hole. Default is TRUE. |
| removalMode | logical add button to remove features. Default is TRUE. |
| position | string toolbar position. Options are 'topleft', 'topright', 'bottomleft', 'bottom-right'. Default is 'topleft'. |

Value

leaflet htmlwidget with added toolbar

removePmToolbar *Removes the 'leaflet.pm' toolbar*

Description

Removes the 'leaflet.pm' toolbar

Usage

```
removePmToolbar(map, clearFeatures = FALSE)
```

removePmToolbar

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Arguments

map leaflet map htmlwidget from which the toolbar should be removed
clearFeatures whether to clear the map of drawn features. currently not working

Value

leaflet htmlwidget

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