Package: ggseg.meshes (via r-universe)

July 9, 2026

Title Additional Brain Surface Meshes for the 'ggsegverse' Ecosystem

Version 0.0.1

Description Provides additional brain surface meshes for cortical and cerebellar visualisation in the 'ggsegverse' ecosystem. Cortical surfaces include pial, white, midthickness, semi-inflated, sphere, smoothwm, and orig at fsaverage5 resolution. Cerebellar surfaces include the Spatially Unbiased Infratentorial Template (SUIT) flatmap. All meshes follow the same vertices/faces data frame format used by 'ggseg.formats' and 'ggseg3d'.

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Depends R (>= 4.1.0)

Imports cli

Suggests freesurfer, freesurferformats, gifti, ggseg.formats, knitr, rmarkdown, testthat (>= 3.0.0)

VignetteBuilder knitr

Config/testthat/edition 3

Config/Needs/website ggsegverse/ggseg.docs

Encoding UTF-8

Roxygen list(markdown = TRUE)

RoxygenNote 7.3.3

URL https://github.com/ggsegverse/ggseg.meshes, https://ggsegverse.github.io/ggseg.meshes/

BugReports https://github.com/ggsegverse/ggseg.meshes/issues

Repository https://r-multiverse.r-universe.dev

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Contents

`available_cerebellar_surfaces`
List available cerebellar surfaces

Description

List available cerebellar surfaces

Usage

```
available_cerebellar_surfaces()
```

Value

Character vector of available surface names.

Examples

```
available_cerebellar_surfaces()
```

`available_cortical_surfaces`
List available cortical surfaces

Description

List available cortical surfaces

Usage

```
available_cortical_surfaces()
```

Value

Character vector of available surface names.

Examples

```
available_cortical_surfaces()
```

get_cerebellar_flatmap *Get SUIT cerebellar flatmap mesh*

Description

Retrieves the SUIT cerebellar flatmap surface mesh. This is a 2D flattened representation of the cerebellar cortex, useful for visualising cerebellar parcellations without 3D rendering.

Usage

```
get_cerebellar_flatmap(surface = .cerebellar_surfaces)
```

Arguments

surface	Surface type. Currently only "suit_flat".

Details

The flatmap has z-coordinates near zero (flat projection). Vertex count matches the SUIT 3D pial surface in ggseg.formats, so vertex indices from cerebellar atlases map directly to this mesh.

Value

A list with vertices (data.frame with x, y, z) and faces (data.frame with i, j, k, 0-based indices matching ggseg.formats convention for cerebellar meshes). Has attribute face_index_base = 0L.

Examples

```
mesh <- get_cerebellar_flatmap()
nrow(mesh$vertices)
```

get_cortical_mesh *Get cortical brain surface mesh*

Description

Retrieves a cortical brain surface mesh for the specified hemisphere and surface type. All surfaces are fsaverage5 resolution (10,242 vertices, 20,480 faces per hemisphere).

Usage

```
get_cortical_mesh(hemisphere = c("lh", "rh"), surface = .cortical_surfaces)
```

Arguments

hemisphere	"lh" or "rh"
surface	Surface type: "pial", "white", "midthickness", "semi-inflated", "sphere", "smoothwm", or "orig"

Value

A list with vertices (data.frame with x, y, z) and faces (data.frame with i, j, k, 1-based indices). Has attribute face_index_base = 1L.

Examples

```
mesh <- get_cortical_mesh("lh", "pial")
nrow(mesh$vertices)
```

Index