

Package ‘netknitr’

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Type Package

Title Knit Network Map for any Dataset

Version 0.2.1

Description Designed to create interactive and visually compelling network maps using R Shiny. It allows users to quickly analyze CSV files and visualize complex relationships, structures, and connections within data by leveraging powerful network analysis libraries and dynamic web interfaces.

Depends R (>= 3.1.0),

Imports openxlsx, utils, shiny, shinydashboard, dplyr, visNetwork

License GPL-3

Encoding UTF-8

RoxygenNote 7.3.2

Suggests knitr, rmarkdown, testthat (>= 3.0.0)

VignetteBuilder knitr

Config/testthat/edition 3

NeedsCompilation no

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createVisNetwork	<i>createVisNetwork</i>
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Description

Generates network map using the nodes and edges objects generated by `getNode`s and `getEdges` functions respectively.

Usage

```
createVisNetwork(  
  nodes,  
  edges,  
  background = "lightblue",  
  border = "darkblue",  
  highlight = "yellow"  
)
```

Arguments

<code>nodes</code>	Nodes.
<code>edges</code>	Edges.
<code>background</code>	Background color.
<code>border</code>	Border color.
<code>highlight</code>	Highlight color.

Value

Network map visualization

Author(s)

Jayachandra N

Examples

```
nodes <- getNode(s(head(mtcars), c("cyl", "gear", "vs")), group = TRUE)  
res <- fixNodeBias(head(mtcars))  
edges <- getEdges(getAssociation(res), getNode(s(res), group = TRUE))  
createVisNetwork(nodes, edges)
```

fixNodeBias	<i>fixNodeBias</i>
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Description

Fix the possible bias that occurs while generating the nodes.

Usage

```
fixNodeBias(my_data)
```

Arguments

my_data data frame

Value

data frame

Author(s)

Jayachandra N

Examples

```
res <- fixNodeBias(head(mtcars))
```

getAssociation	<i>getAssociation</i>
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Description

Determine the associations between the values of different columns within the input data frame crude_data.

Usage

```
getAssociation(crude_data)
```

Arguments

crude_data data frame to get associations between the values of different columns

Value

data frame of edges indicating from and to nodes

Author(s)

Jayachandra N

Examples

```
getAssociation(head(mtcars))
```

getEdges

getEdges

Description

Generate edges or lines data frame which defines the link between nodes.

Usage

```
getEdges(polished_data, nodes)
```

Arguments

polished_data data frame, output of getAssociation function

nodes data frame, output of getNodes function

Value

data frame of edges indicating from and to node ids

Author(s)

Jayachandra N

Examples

```
res <- fixNodeBias(head(mtcars))  
edges <- getEdges(getAssociation(res), getNodes(res, group = TRUE))
```

getNodes	<i>getNodes</i>
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Description

Generate nodes for the input data frame, returns data frame of possible nodes and its IDs for the further process.

Usage

```
getNodes(crude_data, columns_for_nodes = NULL, group = FALSE)
```

Arguments

crude_data	Data Frame that you want to build a network for.
columns_for_nodes	Vector of column names for crude_data, works well for at least 3 columns
group	Logical value, set TRUE to differentiate nodes by shapes and colors. Default value is FALSE

Value

Data frame, each unique item is a node and associated with unique id

Author(s)

Jayachandra N

Examples

```
getNodes(head(mtcars), c("cyl", "gear", "vs"), group = TRUE)
```

getShapes	<i>getShapes</i>
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Description

Generate shapes for the given nodes, shapes can be defined using the shapes otherwise defaults to null.

Usage

```
getShapes(nodes, shapes = NULL)
```

Arguments

nodes nodes data, output of getNodes function
shapes character vector indicating manual shapes to choose for nodes

Value

a vector of shapes which is ready to cbind with nodes data

Author(s)

Jayachandra N

Examples

```
nodes <- getNodes(head(mtcars), c("cyl", "gear", "vs"), group =TRUE)  
nodes$shape <- getShapes(nodes)
```

knitNet

knitNet

Description

Run inbuilt R shiny app.

Usage

```
knitNet()
```

Value

shiny ui page

Author(s)

Jayachandra N

Examples

```
knitNet()
```

readMyFile	<i>readMyFile</i>
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Description

Read input files including .csv, .xlsx and .txt files in tabular format and return as data.frame.

Usage

```
readMyFile(this_file)
```

Arguments

this_file File path

Value

data.frame, content of the file.

Author(s)

Jayachandra N

Examples

```
temp_file <- tempfile(fileext = ".csv")
write.csv(mtcars, temp_file)
readMyFile(temp_file)
```

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