

Package ‘jsmodule’

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Title 'RStudio' Addins and 'Shiny' Modules for Medical Research

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Description

'RStudio' addins and 'Shiny' modules for descriptive statistics, regression and survival analysis.

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URL <https://jinseob2kim.github.io/jsmodule/>,
<https://github.com/jinseob2kim/jsmodule>

BugReports <https://github.com/jinseob2kim/jsmodule/issues>

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barServer	<i>barServer: shiny module server for barplot.</i>
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Description

Shiny module server for barplot.

Usage

```
barServer(id, data, data_label, data_varStruct = NULL, nfactor.limit = 10)
```

Arguments

id	id
data	Reactive data
data_label	Reactive data label
data_varStruct	Reactive List of variable structure, Default: NULL
nfactor.limit	nlevels limit in factor variable, Default: 10

Details

Shiny module server for barplot.

Value

Shiny module server for barplot.

Examples

```
library(shiny)
library(ggplot2)
library(ggpubr)
ui <- fluidPage(
  sidebarLayout(
    sidebarPanel(
      barUI("bar")
    ),
    mainPanel(
      optionUI("bar"),
      plotOutput("bar_plot"),
      ggplotdownUI("bar")
    )
  )
)

server <- function(input, output, session) {
  data <- reactive(mtcars)
  data.label <- reactive(jstable::mk.lev(mtcars))

  out_bar <- barServer("bar",
    data = data, data_label = data.label,
    data_varStruct = NULL
  )

  output$bar_plot <- renderPlot({
    print(out_bar())
  })
}
```

barUI

barUI: shiny module UI for barplot

Description

Shiny module UI for barplot

Usage

```
barUI(id, label = "barplot")
```

Arguments

id	id
label	label

Details

Shiny module UI for barplot

Value

Shiny module UI for barplot

Examples

```
library(shiny)
library(ggplot2)
library(ggpubr)
ui <- fluidPage(
  sidebarLayout(
    sidebarPanel(
      barUI("bar")
    ),
    mainPanel(
      optionUI("bar"),
      plotOutput("bar_plot"),
      ggplotdownUI("bar")
    )
  )
)

server <- function(input, output, session) {
  data <- reactive(mtcars)
  data.label <- reactive(jstable::mk.lev(mtcars))

  out_bar <- barServer("bar",
    data = data, data_label = data.label,
    data_varStruct = NULL
  )

  output$bar_plot <- renderPlot({
    print(out_bar())
  })
}
```

boxServer

boxServer: shiny module server for boxplot.

Description

Shiny module server for boxplot.

Usage

```
boxServer(id, data, data_label, data_varStruct = NULL, nfactor.limit = 10)
```

Arguments

id	id
data	Reactive data
data_label	Reactive data label
data_varStruct	Reactive List of variable structure, Default: NULL
nfactor.limit	nlevels limit in factor variable, Default: 10

Details

Shiny module server for boxplot.

Value

Shiny module server for boxplot.

Examples

```
library(shiny)
library(ggplot2)
library(ggpubr)
ui <- fluidPage(
  sidebarLayout(
    sidebarPanel(
      boxUI("box")
    ),
    mainPanel(
      optionUI("box"),
      plotOutput("box_plot"),
      ggplotdownUI("box")
    )
  )
)

server <- function(input, output, session) {
  data <- reactive(mtcars)
  data.label <- reactive(jstable::mk.lev(mtcars))

  out_box <- boxServer("box",
    data = data, data_label = data.label,
    data_varStruct = NULL
  )

  output$box_plot <- renderPlot({
    print(out_box())
  })
}
```

boxUI

boxUI: shiny module UI for boxplot

Description

Shiny module UI for boxplot

Usage

```
boxUI(id, label = "boxplot")
```

Arguments

id	id
label	label

Details

Shiny module UI for boxplot

Value

Shiny module UI for boxplot

Examples

```
library(shiny)
library(ggplot2)
library(ggpubr)
ui <- fluidPage(
  sidebarLayout(
    sidebarPanel(
      boxUI("box")
    ),
    mainPanel(
      optionUI("box"),
      plotOutput("box_plot"),
      ggplotdownUI("box")
    )
  )
)

server <- function(input, output, session) {
  data <- reactive(mtcars)
  data.label <- reactive(jstable::mk.lev(mtcars))

  out_box <- boxServer("box",
    data = data, data_label = data.label,
    data_varStruct = NULL
```

```

)

output$box_plot <- renderPlot({
  print(out_box())
})
}

```

 coxModule

coxModule: shiny module server for Cox's model.

Description

Shiny module server for Cox's model.

Usage

```

coxModule(
  input,
  output,
  session,
  data,
  data_label,
  data_varStruct = NULL,
  nfactor.limit = 10,
  design.survey = NULL,
  default.unires = T,
  limit.unires = 20,
  id.cluster = NULL,
  ties.coxph = "efron"
)

```

Arguments

input	input
output	output
session	session
data	reactive data
data_label	reactive data label
data_varStruct	reactive list of variable structure, Default: NULL
nfactor.limit	nlevels limit in factor variable, Default: 10
design.survey	reactive survey data. default: NULL
default.unires	Set default independent variables using univariate analysis.
limit.unires	Change to default.unires = F if number of independent variables > limit.unires, Default: 20
id.cluster	reactive cluster variable if marginal cox model, Default: NULL
ties.coxph	'coxph' ties option, one of 'efron', 'breslow', 'exact', default: 'erfon'

Details

Shiny module server for Cox's model.

Value

Shiny module server for Cox's model.

Examples

```
library(shiny)
library(DT)
library(data.table)
library(jstable)
ui <- fluidPage(
  sidebarLayout(
    sidebarPanel(
      coxUI("cox")
    ),
    mainPanel(
      DTOutput("coxtable")
    )
  )
)

server <- function(input, output, session) {
  data <- reactive(mtcars)
  data.label <- reactive(jstable::mk.lev(mtcars))

  out_cox <- callModule(coxModule, "cox",
    data = data, data_label = data.label,
    data_varStruct = NULL
  )

  output$coxtable <- renderDT({
    datatable(out_cox()$table, rownames = T, caption = out_cox()$caption)
  })
}
```

coxUI

coxUI: shiny module UI for Cox's model.

Description

Shiny module UI for Cox's model.

Usage

```
coxUI(id)
```

Arguments

id id

Details

Shiny module UI for Cox's model.

Value

coxUI

Examples

```
coxUI(1)
```

csvFile

csvFile: Shiny module Server for file upload.

Description

Shiny module Server for file(csv or xlsx) upload.

Usage

```
csvFile(input, output, session, nfactor.limit = 20)
```

Arguments

input input
output output
session session
nfactor.limit nfactor limit to include, Default: 20

Details

Shiny module Server for file(csv or xlsx) upload.

Value

Shiny module Server for file(csv or xlsx) upload.

Examples

```

library(shiny)
library(DT)
library(data.table)
library(readxl)
library(jstable)
ui <- fluidPage(
  sidebarLayout(
    sidebarPanel(
      csvFileInput("datafile")
    ),
    mainPanel(
      tabsetPanel(
        type = "pills",
        tabPanel("Data", DTOutput("data")),
        tabPanel("Label", DTOutput("data_label", width = "100%"))
      )
    )
  )
)

server <- function(input, output, session) {
  data <- callModule(csvFile, "datafile")

  output$data <- renderDT({
    data()$data
  })

  output$label <- renderDT({
    data()$label
  })
}

```

 csvFileInput

csvFileInput: Shiny module UI for file upload.

Description

Shiny module UI for file(csv or xlsx) upload.

Usage

```
csvFileInput(id, label = "Upload data (csv/xlsx/sav/sas7bdat/dta)")
```

Arguments

id	id
label	label, Default: 'csv/xlsx/sav/sas7bdat/dta file'

Details

Shiny module UI for file(csv or xlsx) upload.

Value

Shiny module UI for file(csv or xlsx) upload.

Examples

```
library(shiny)
library(DT)
library(data.table)
library(readxl)
library(jsttable)
ui <- fluidPage(
  sidebarLayout(
    sidebarPanel(
      csvFileInput("datafile")
    ),
    mainPanel(
      tabsetPanel(
        type = "pills",
        tabPanel("Data", DTOutput("data")),
        tabPanel("Label", DTOutput("data_label", width = "100%"))
      )
    )
  )
)

server <- function(input, output, session) {
  data <- callModule(csvFile, "datafile")

  output$data <- renderDT({
    data()$data
  })

  output$label <- renderDT({
    data()$label
  })
}
```

FilePs

FilePs: Shiny module Server for file upload for propensity score matching.

Description

Shiny module Server for file upload for propensity score matching.

Usage

```
FilePs(input, output, session, nfactor.limit = 20)
```

Arguments

input	input
output	output
session	session
nfactor.limit	nfactor limit to include, Default: 20

Details

Shiny module Server for file upload for propensity score matching.

Value

Shiny module Server for file upload for propensity score matching.

Examples

```
library(shiny)
library(DT)
library(data.table)
library(readxl)
library(jstable)
ui <- fluidPage(
  sidebarLayout(
    sidebarPanel(
      FilePsInput("datafile")
    ),
    mainPanel(
      tabsetPanel(
        type = "pills",
        tabPanel("Data", DTOutput("data")),
        tabPanel("Matching data", DTOutput("matdata")),
        tabPanel("Label", DTOutput("data_label", width = "100%"))
      )
    )
  )
)

server <- function(input, output, session) {
  mat.info <- callModule(FilePs, "datafile")

  output$data <- renderDT({
    mat.info()$data
  })

  output$matdata <- renderDT({
    mat.info()$matdata
  })
}
```

```

    })
    output$label <- renderDT({
      mat.info()$label
    })
  }
}

```

FilePsInput

FilePsInput: Shiny module UI for file upload for propensity score matching.

Description

Shiny module UI for file upload for propensity score matching.

Usage

```
FilePsInput(id, label = "Upload data (csv/xlsx/sav/sas7bdat/dta)")
```

Arguments

id	id
label	label, Default: 'csv/xlsx/sav/sas7bdat file'

Details

Shiny module UI for file upload for propensity score matching.

Value

Shiny module UI for file upload for propensity score matching.

Examples

```

library(shiny)
library(DT)
library(data.table)
library(readxl)
library(jstable)
ui <- fluidPage(
  sidebarLayout(
    sidebarPanel(
      FilePsInput("datafile")
    ),
    mainPanel(
      tabsetPanel(
        type = "pills",
        tabPanel("Data", DTOutput("data")),
        tabPanel("Matching data", DTOutput("matdata")),

```

```

        tabPanel("Label", DTOutput("data_label", width = "100%"))
      )
    )
  )
}

server <- function(input, output, session) {
  mat.info <- callModule(FilePs, "datafile")

  output$data <- renderDT({
    mat.info()$data
  })

  output$matdata <- renderDT({
    mat.info()$matdata
  })

  output$label <- renderDT({
    mat.info()$label
  })
}

```

FileRepeated

FileRepeated: File upload server module for repeated measure analysis.

Description

File upload server module for repeated measure analysis.

Usage

```
FileRepeated(input, output, session, nfactor.limit = 20)
```

Arguments

input	input
output	output
session	session
nfactor.limit	nfactor limit to include, Default: 20

Details

File upload server module for repeated measure analysis.

Value

File upload server module for repeated measure analysis.

Examples

```

library(shiny)
library(DT)
library(data.table)
library(readxl)
library(jstable)
ui <- fluidPage(
  sidebarLayout(
    sidebarPanel(
      FileRepeatedInput("datafile")
    ),
    mainPanel(
      tabsetPanel(
        type = "pills",
        tabPanel("Data", DTOutput("data")),
        tabPanel("Label", DTOutput("data_label", width = "100%"))
      )
    )
  )
)

server <- function(input, output, session) {
  data <- callModule(FileRepeated, "datafile")

  output$data <- renderDT({
    data()$data
  })

  output$label <- renderDT({
    data()$label
  })
}

```

FileRepeatedInput

FileRepeatedInput: File upload UI for repeated measure analysis.

Description

File upload UI for repeated measure analysis.

Usage

```
FileRepeatedInput(id, label = "Upload data (csv/xlsx/sav/sas7bdat/dta)")
```

Arguments

id	id
label	label, Default: 'csv/xlsx/sav/sas7bdat/dta file'

Details

File upload UI for repeated measure analysis.

Value

File upload UI for repeated measure analysis.

Examples

```
library(shiny)
library(DT)
library(data.table)
library(readxl)
library(jstable)
ui <- fluidPage(
  sidebarLayout(
    sidebarPanel(
      FileRepeatedInput("datafile")
    ),
    mainPanel(
      tabsetPanel(
        type = "pills",
        tabPanel("Data", DTOutput("data")),
        tabPanel("Label", DTOutput("data_label", width = "100%"))
      )
    )
  )
)

server <- function(input, output, session) {
  data <- callModule(FileRepeated, "datafile")

  output$data <- renderDT({
    data()$data
  })

  output$label <- renderDT({
    data()$label
  })
}
```

Description

File upload server module for survey data analysis.

Usage

```
FileSurvey(input, output, session, nfactor.limit = 20)
```

Arguments

input	input
output	output
session	session
nfactor.limit	nfactor limit to include, Default: 20

Details

File upload server module for survey data analysis.

Value

File upload server module for survey data analysis.

Examples

```
library(shiny)
library(DT)
library(data.table)
library(readxl)
library(jstable)
ui <- fluidPage(
  sidebarLayout(
    sidebarPanel(
      FileSurveyInput("datafile")
    ),
    mainPanel(
      tabsetPanel(
        type = "pills",
        tabPanel("Data", DTOutput("data")),
        tabPanel("Label", DTOutput("data_label", width = "100%"))
      )
    )
  )
)

server <- function(input, output, session) {
  data <- callModule(FileSurvey, "datafile")

  output$data <- renderDT({
    data()$data
  })

  output$label <- renderDT({
    data()$label
  })
}
```

FileSurveyInput	<i>FileSurveyInput: File upload UI for survey data analysis.</i>
-----------------	--

Description

File upload UI for survey data analysis.

Usage

```
FileSurveyInput(id, label = "Upload data (csv/xlsx/sav/sas7bdat/dta)")
```

Arguments

id	id
label	label, Default: 'csv/xlsx/sav/sas7bdat/dta file'

Details

File upload UI for survey data analysis.

Value

File upload UI for survey data analysis.

Examples

```
library(shiny)
library(DT)
library(data.table)
library(readxl)
library(jstable)
ui <- fluidPage(
  sidebarLayout(
    sidebarPanel(
      FileSurveyInput("datafile")
    ),
    mainPanel(
      tabsetPanel(
        type = "pills",
        tabPanel("Data", DTOutput("data")),
        tabPanel("Label", DTOutput("data_label", width = "100%"))
      )
    )
  )
)

server <- function(input, output, session) {
  data <- callModule(FileSurvey, "datafile")
}
```

```

output$data <- renderDT({
  data()$data
})

output$label <- renderDT({
  data()$label
})
}

```

forestcoxServer

forestcoxServer:shiny module server for forestcox

Description

Shiny module server for forestcox

Usage

```

forestcoxServer(
  id,
  data,
  data_label,
  data_varStruct = NULL,
  nfactor.limit = 10,
  design.survey = NULL
)

```

Arguments

id	id
data	Reactive data
data_label	Reactive data label
data_varStruct	Reactive List of variable structure, Default: NULL
nfactor.limit	nlevels limit in factor variable, Default: 10
design.survey	reactive survey data. default: NULL

Details

Shiny module server for forestcox

Value

Shiny module server for forestcox

See Also

[data.table-package](#), [setDT](#), [setattr](#) [TableSubgroupMultiCox](#) [forest_theme](#), [forest](#) [dml](#) [read_pptx](#), [add_slide](#), [ph_with](#), [ph_location](#)

Examples

```

library(shiny)
library(DT)
mtcars$vs <- factor(mtcars$vs)
mtcars$am <- factor(mtcars$am)
mtcars$kk <- factor(as.integer(mtcars$disp >= 150))
mtcars$kk1 <- factor(as.integer(mtcars$disp >= 200))

library(shiny)
library(DT)
mtcars$vs <- factor(mtcars$vs)
mtcars$am <- factor(mtcars$am)
mtcars$kk <- factor(as.integer(mtcars$disp >= 150))
mtcars$kk1 <- factor(as.integer(mtcars$disp >= 200))

out <- mtcars
ui <- fluidPage(
  sidebarLayout(
    sidebarPanel(
      forestcoxUI("Forest")
    ),
    mainPanel(
      tabsetPanel(
        type = "pills",
        tabPanel(
          title = "Data",
          DTOutput("tablesub"),
        ),
        tabPanel(
          title = "figure",
          plotOutput("forestplot", width = "100%"),
          ggplotdownUI("Forest")
        )
      )
    )
  )
)

server <- function(input, output, session) {
  data <- reactive(out)
  label <- reactive(jstable::mk.lev(out))
  outtable <- forestcoxServer("Forest", data = data, data_label = label)
  output$tablesub <- renderDT({
    outtable()[[1]]
  })
  output$forestplot <- renderPlot({
    a
    outtable()[[2]]
  })
}

```

`forestcoxUI`*forestcoxUI:shiny module UI for forestcox*

Description

Shiny module UI for forestcox

Usage

```
forestcoxUI(id, label = "forestplot")
```

Arguments

<code>id</code>	<code>id</code>
<code>label</code>	label, Default: 'forestplot'

Details

Shiny module UI for forestcox

Value

Shiny module UI

Examples

```
library(shiny)
library(DT)
mtcars$vs <- factor(mtcars$vs)
mtcars$am <- factor(mtcars$am)
mtcars$kk <- factor(as.integer(mtcars$disp >= 150))
mtcars$kk1 <- factor(as.integer(mtcars$disp >= 200))

library(shiny)
library(DT)
mtcars$vs <- factor(mtcars$vs)
mtcars$am <- factor(mtcars$am)
mtcars$kk <- factor(as.integer(mtcars$disp >= 150))
mtcars$kk1 <- factor(as.integer(mtcars$disp >= 200))

out <- mtcars
ui <- fluidPage(
  sidebarLayout(
    sidebarPanel(
      forestcoxUI("Forest")
    ),
    mainPanel(
      tabsetPanel(
        type = "pills",
```

```

        tabPanel(
          title = "Data",
          DTOutput("tablesub")
        ),
        tabPanel(
          title = "figure",
          plotOutput("forestplot", width = "100%"),
          ggplotdownUI("Forest")
        )
      )
    )
  )
)

server <- function(input, output, session) {
  data <- reactive(out)
  label <- reactive(jstable::mk.lev(out))
  outtable <- forestcoxServer("Forest", data = data, data_label = label)
  output$tablesub <- renderDT({
    outtable()[[1]]
  })
  output$forestplot <- renderPlot({
    outtable()[[2]]
  })
}

```

forestglmServer

forestglmServer:shiny module server for forestglm

Description

Shiny module server for forestglm

Usage

```

forestglmServer(
  id,
  data,
  data_label,
  family,
  data_varStruct = NULL,
  nfactor.limit = 10,
  design.survey = NULL
)

```

Arguments

id	id
data	Reactive data
data_label	Reactive data label
family	family, "gaussian" or "binomial" or 'poisson' or 'quasipoisson'
data_varStruct	Reactive List of variable structure, Default: NULL
nfactor.limit	nlevels limit in factor variable, Default: 10
design.survey	reactive survey data. default: NULL

Details

Shiny module server for forestglm

Value

Shiny module server for forestglm

See Also

[TableSubgroupMultiGLM](#), [data.table](#)-package, [setDT](#), [setattr](#), [cor](#), [coef](#), [surveysummary](#), [svytable](#), [forest_theme](#), [forest_dml](#), [read_pptx](#), [add_slide](#), [ph_with](#), [ph_location](#)

Examples

```
library(shiny)
library(DT)
mtcars$vs <- factor(mtcars$vs)
mtcars$am <- factor(mtcars$am)
mtcars$kk <- factor(as.integer(mtcars$disp >= 150))
mtcars$kk1 <- factor(as.integer(mtcars$disp >= 200))

ui <- fluidPage(
  sidebarLayout(
    sidebarPanel(
      forestglmUI("Forest")
    ),
    mainPanel(
      tabsetPanel(
        type = "pills",
        tabPanel(
          title = "Data",
          DTOutput("tablesub"),
        ),
        tabPanel(
          title = "figure",
          plotOutput("forestplot", width = "100%"),
          ggplotdownUI("Forest")
        )
      )
    )
  )
)
```



```

    )
  )
)

out <- mtcars

server <- function(input, output, session) {
  data <- reactive(out)
  label <- reactive(jstable::mk.lev(out))
  outtable <- forestglmServer("Forest", data = data, data_label = label, family = "binomial")
  output$stablesub <- renderDT({
    outtable()[[1]]
  })
  output$forestplot <- renderPlot({
    outtable()[[2]]
  })
}

```

forestglmUI

forestglmUI:Shiny module UI for forestglm

Description

Shiny module UI for forestcox

Usage

```
forestglmUI(id, label = "forestplot")
```

Arguments

id	id
label	label, Default: 'forestplot'

Details

Shiny module UI for forestglm

Value

Shiny module UI

Examples

```

library(shiny)
library(DT)
mtcars$vs <- factor(mtcars$vs)
mtcars$am <- factor(mtcars$am)
mtcars$kk <- factor(as.integer(mtcars$disp >= 150))
mtcars$kk1 <- factor(as.integer(mtcars$disp >= 200))

ui <- fluidPage(
  sidebarLayout(
    sidebarPanel(
      forestglmUI("Forest")
    ),
    mainPanel(
      tabsetPanel(
        type = "pills",
        tabPanel(
          title = "Data",
          DTOutput("tablesub"),
        ),
        tabPanel(
          title = "figure",
          plotOutput("forestplot", width = "100%"),
          ggplotdownUI("Forest")
        )
      )
    )
  )
)

out <- mtcars

server <- function(input, output, session) {
  data <- reactive(out)
  label <- reactive(jstable::mk.lev(out))
  outtable <- forestglmServer("Forest", data = data, data_label = label, family = "binomial")
  output$tablesub <- renderDT({
    outtable()[[1]]
  })
  output$forestplot <- renderPlot({
    outtable()[[2]]
  })
}

```

Description

Shiny modulde server for gaussian generalized estimating equation(GEE) using reactive data.

Usage

```
GEEModuleLinear(
  input,
  output,
  session,
  data,
  data_label,
  data_varStruct = NULL,
  nfactor.limit = 10,
  id.gee
)
```

Arguments

input	input
output	output
session	session
data	reactive data, ordered by id.
data_label	reactive data label
data_varStruct	List of variable structure, Default: NULL
nfactor.limit	nlevels limit in factor variable, Default: 10
id.gee	reactive repeated measure variable

Details

Shiny modulde server for gaussian generalized estimating equation(GEE) using reactive data.

Value

Shiny modulde server for gaussian generalized estimating equation(GEE).

Examples

```
library(shiny)
library(DT)
library(data.table)
library(jstable)
ui <- fluidPage(
  sidebarLayout(
    sidebarPanel(
      GEEModuleUI("linear")
    ),
    mainPanel(
      DTOutput("lineartable")
    )
  )
)
```

```

    )
  )
)

server <- function(input, output, session) {
  data <- reactive(mtcars)
  data.label <- reactive(jstable::mk.lev(mtcars))
  id.gee <- reactive("mpg")

  out_linear <- callModule(GEEModuleLinear, "linear",
    data = data, data_label = data.label,
    data_varStruct = NULL, id.gee = id.gee
  )

  output$lineartable <- renderDT({
    hide <- which(colnames(out_linear())$table) == "sig")
    datatable(out_linear())$table,
    rownames = T, extension = "Buttons", caption = out_linear()$caption,
    options = c(
      opt.tbreg(out_linear()$caption),
      list(columnDefs = list(list(visible = FALSE, targets = hide))),
      list(scrollX = TRUE)
    )
  ) %>% formatStyle("sig", target = "row", backgroundColor = styleEqual("**", "yellow"))
})
}

```

GEEModuleLogistic

GEEModuleLogistic: shiny module server for binomial gaussian generalized estimating equation(GEE) using reactive data.

Description

Shiny module server for binomial gaussian generalized estimating equation(GEE) using reactive data.

Usage

```

GEEModuleLogistic(
  input,
  output,
  session,
  data,
  data_label,
  data_varStruct = NULL,
  nfactor.limit = 10,
  id.gee
)

```

Arguments

input	input
output	output
session	session
data	reactive data, ordered by id.
data_label	reactive data label
data_varStruct	List of variable structure, Default: NULL
nfactor.limit	nlevels limit in factor variable, Default: 10
id.gee	reactive repeated measure variable

Details

Shiny module server for binomial gaussian generalized estimating equation(GEE) using reactive data.

Value

Shiny module server for binomial gaussian generalized estimating equation(GEE).

Examples

```
library(shiny)
library(DT)
library(data.table)
library(jstable)
ui <- fluidPage(
  sidebarLayout(
    sidebarPanel(
      GEEModuleUI("logistic")
    ),
    mainPanel(
      DTOutput("logistictable")
    )
  )
)

server <- function(input, output, session) {
  data <- reactive(mtcars)
  data.label <- reactive(jstable::mk.lev(mtcars))
  id.gee <- reactive("mpg")

  out_logistic <- callModule(GEEModuleLogistic, "logistic",
    data = data, data_label = data.label,
    data_varStruct = NULL, id.gee = id.gee
  )

  output$logistictable <- renderDT({
    hide <- which(colnames(out_logistic())$table) == "sig")
    datatable(out_logistic())$table,
  })
}
```

```

    rownames = T, extension = "Buttons",
    caption = out_logistic()$caption,
    options = c(
      opt.tbreg(out_logistic()$caption),
      list(columnDefs = list(list(visible = FALSE, targets = hide))),
      list(scrollX = TRUE)
    )
  ) %>% formatStyle("sig", target = "row", backgroundColor = styleEqual("**", "yellow"))
})
}

```

GEEModuleUI

GEEModuleUI: shiny modulde UI for generalized estimating equation(GEE).

Description

Shiny modulde UI for generalized estimating equation(GEE).

Usage

```
GEEModuleUI(id)
```

Arguments

id id

Details

Shiny modulde UI for generalized estimating equation(GEE).

Value

Shiny modulde UI for generalized estimating equation(GEE).

Examples

```

library(shiny)
library(DT)
library(data.table)
library(jstable)
ui <- fluidPage(
  sidebarLayout(
    sidebarPanel(
      GEEModuleUI("linear")
    ),
    mainPanel(
      DTOutput("lineartable")
    )
  )
)

```

```

)

server <- function(input, output, session) {
  data <- reactive(mtcars)
  data.label <- reactive(jstable::mk.lev(mtcars))
  id.gee <- reactive("mpg")

  out_linear <- callModule(GEEModuleLinear, "linear",
    data = data, data_label = data.label,
    data_varStruct = NULL, id.gee = id.gee
  )

  output$lineartable <- renderDT({
    hide <- which(colnames(out_linear())$table) == "sig")
    datatable(out_linear())$table,
    rownames = T, extension = "Buttons", caption = out_linear()$caption,
    options = c(
      opt.tbreg(out_linear())$caption,
      list(columnDefs = list(list(visible = FALSE, targets = hide))),
      list(scrollX = TRUE)
    )
  ) %>% formatStyle("sig", target = "row", backgroundColor = styleEqual("**", "yellow"))
})
}

```

ggpairsModule

ggpairsModule: shiny module server for basic/scatter plot.

Description

Shiny module server for basic/scatter plot.

Usage

```

ggpairsModule(
  input,
  output,
  session,
  data,
  data_label,
  data_varStruct = NULL,
  nfactor.limit = 20
)

```

Arguments

input	input
output	output
session	session

data	data
data_label	data label
data_varStruct	List of variable structure, Default: NULL
nfactor.limit	nlevels limit for categorical variables, Default: 20

Details

Shiny module server for basic/scatter plot.

Value

Shiny module server for basic/scatter plot.

Examples

```
library(shiny)
library(DT)
library(data.table)
library(jstable)
library(ggplot2)
library(GGally)

ui <- fluidPage(
  sidebarLayout(
    sidebarPanel(
      ggpairsModuleUI1("ggpairs")
    ),
    mainPanel(
      plotOutput("ggpairs_plot"),
      ggpairsModuleUI2("ggpairs")
    )
  )
)

server <- function(input, output, session) {
  data <- mtcars
  data.label <- jstable::mk.lev(mtcars)

  out_ggpairs <- callModule(ggpairsModule, "ggpairs",
    data = data, data_label = data.label,
    data_varStruct = NULL
  )

  output$kaplan_plot <- renderPlot({
    print(out_ggpairs())
  })
}
```

ggpairsModule2	<i>ggpairsModule2: shiny module server for basic/scatter plot for reactive data.</i>
----------------	--

Description

Shiny module server for basic/scatter plot for reactive data.

Usage

```
ggpairsModule2(  
  input,  
  output,  
  session,  
  data,  
  data_label,  
  data_varStruct = NULL,  
  nfactor.limit = 20  
)
```

Arguments

input	input
output	output
session	session
data	Reactive data
data_label	Reactive data label
data_varStruct	List of variable structure, Default: NULL
nfactor.limit	nlevels limit for categorical variables, Default: 20

Details

Shiny module server for basic/scatter plot for reactive data.

Value

Shiny module server for basic/scatter plot

Examples

```
library(shiny)  
library(DT)  
library(data.table)  
library(jstable)  
library(ggplot2)  
library(GGally)
```

```

ui <- fluidPage(
  sidebarLayout(
    sidebarPanel(
      ggpairsModuleUI1("ggpairs")
    ),
    mainPanel(
      plotOutput("ggpairs_plot"),
      ggpairsModuleUI2("ggpairs")
    )
  )
)

server <- function(input, output, session) {
  data <- reactive(mtcars)
  data.label <- reactive(jstable::mk.lev(mtcars))

  out_ggpairs <- callModule(ggpairsModule2, "ggpairs",
    data = data, data_label = data.label,
    data_varStruct = NULL
  )

  output$kaplan_plot <- renderPlot({
    print(out_ggpairs())
  })
}

```

ggpairsModuleUI1

ggpairsModuleUI1: Variable selection module UI for ggpairs

Description

Variable selection module UI for ggpairs

Usage

```
ggpairsModuleUI1(id)
```

Arguments

id id

Details

Variable selection module UI for ggpairs

Value

Variable selection module UI for ggpairs

Examples

```
library(shiny)
library(DT)
library(data.table)
library(jstable)
library(ggplot2)
library(GGally)

ui <- fluidPage(
  sidebarLayout(
    sidebarPanel(
      ggpairsModuleUI1("ggpairs")
    ),
    mainPanel(
      plotOutput("ggpairs_plot"),
      ggpairsModuleUI2("ggpairs")
    )
  )
)

server <- function(input, output, session) {
  data <- reactive(mtcars)
  data.label <- reactive(jstable::mk.lev(mtcars))

  out_ggpairs <- callModule(ggpairsModule2, "ggpairs",
    data = data, data_label = data.label,
    data_varStruct = NULL
  )

  output$kaplan_plot <- renderPlot({
    print(out_ggpairs())
  })
}
```

`ggpairsModuleUI2`*ggpairsModuleUI2: Option & download module UI for ggpairs*

Description

Option & download module UI for ggpairs

Usage

```
ggpairsModuleUI2(id)
```

Arguments

`id` `id`

Details

Option & download module UI for ggpairs

Value

Option & download module UI for ggpairs

Examples

```
library(shiny)
library(DT)
library(data.table)
library(jstable)
library(ggplot2)
library(GGally)

ui <- fluidPage(
  sidebarLayout(
    sidebarPanel(
      ggpairsModuleUI1("ggpairs")
    ),
    mainPanel(
      plotOutput("ggpairs_plot"),
      ggpairsModuleUI2("ggpairs")
    )
  )
)

server <- function(input, output, session) {
  data <- reactive(mtcars)
  data.label <- reactive(jstable::mk.lev(mtcars))

  out_ggpairs <- callModule(ggpairsModule2, "ggpairs",
    data = data, data_label = data.label,
    data_varStruct = NULL
  )

  output$kaplan_plot <- renderPlot({
    print(out_ggpairs())
  })
}
```

ggplotdownUI

ggplotdownUI: Option & download module UI for ggplot

Description

Option & download module UI for ggplot

Usage

```
ggplotdownUI(id)
```

Arguments

```
id          id
```

Details

Option & download module UI for ggplot

Value

Option & download module UI for ggplot

Examples

```
library(shiny)
library(DT)
library(data.table)
library(jstable)
library(ggplot2)
ui <- fluidPage(
  sidebarLayout(
    sidebarPanel(
      kaplanUI("kaplan")
    ),
    mainPanel(
      plotOutput("kaplan_plot"),
      ggplotdownUI("kaplan")
    )
  )
)

server <- function(input, output, session) {
  data <- reactive(mtcars)
  data.label <- reactive(jstable::mk.lev(mtcars))

  out_kaplan <- callModule(kaplanModule, "kaplan",
    data = data, data_label = data.label,
    data_varStruct = NULL
  )

  output$kaplan_plot <- renderPlot({
    print(out_kaplan())
  })
}
```

histogramServer *histogramServer: shiny module server for histogram.*

Description

Shiny module server for histogram.

Usage

```
histogramServer(  
  id,  
  data,  
  data_label,  
  data_varStruct = NULL,  
  nfactor.limit = 10  
)
```

Arguments

id	id
data	Reactive data
data_label	Reactive data label
data_varStruct	Reactive List of variable structure, Default: NULL
nfactor.limit	nlevels limit in factor variable, Default: 10

Details

Shiny module server for histogram.

Value

Shiny module server for histogram.

Examples

```
library(shiny)  
library(ggplot2)  
library(ggpubr)  
ui <- fluidPage(  
  sidebarLayout(  
    sidebarPanel(  
      histogramUI("histogram")  
    ),  
    mainPanel(  
      plotOutput("histogram"),  
      ggplotdownUI("histogram")  
    )  
  )  
)
```

```

    )
  )

  server <- function(input, output, session) {
    data <- reactive(mtcars)
    data.label <- reactive(jstable::mk.lev(mtcars))

    out_histogram <- histogramServer("histogram",
      data = data, data_label = data.label,
      data_varStruct = NULL
    )

    output$histogram <- renderPlot({
      print(out_histogram())
    })
  }

```

histogramUI

histogramUI: shiny module UI for histogram

Description

Shiny module UI for histogram

Usage

```
histogramUI(id, label = "histogram")
```

Arguments

id	id
label	label

Details

Shiny module UI for histogram

Value

Shiny module UI for histogram

Examples

```

library(shiny)
library(ggplot2)
library(ggpubr)
ui <- fluidPage(
  sidebarLayout(
    sidebarPanel(

```

```
      histogramUI("histogram")
    ),
    mainPanel(
      plotOutput("histogram"),
      ggplotdownUI("histogram")
    )
  )
)

server <- function(input, output, session) {
  data <- reactive(mtcars)
  data.label <- reactive(jstable::mk.lev(mtcars))

  out_histogram <- histogramServer("histogram",
    data = data, data_label = data.label,
    data_varStruct = NULL
  )

  output$histogram <- renderPlot({
    print(out_histogram())
  })
}
```

jsBasicAddin

jsBasicAddin: Rstudio addin of jsBasicGadget

Description

Rstudio addin of jsBasicGadget

Usage

```
jsBasicAddin()
```

Details

Rstudio addin of jsBasicGadget

Value

Rstudio addin of jsBasicGadget

See Also

[rstudio-editors](#)

Examples

```
if (interactive()) {
  jsBasicAddin()
}
```

jsBasicExtAddin	<i>jsBasicExtAddin: RStudio Addin for basic data analysis with external data.</i>
-----------------	---

Description

RStudio Addin for basic data analysis with external csv/xlsx/sas7bdat/sav/dta file.

Usage

```
jsBasicExtAddin(nfactor.limit = 20, max.filesize = 2048)
```

Arguments

`nfactor.limit` nlevels limit for categorical variables, Default: 20
`max.filesize` Maximum file size to upload (MB), Default: 2048 (2 GB)

Details

RStudio Addin for basic data analysis with external csv/xlsx/sas7bdat/sav/dta file.

Value

RStudio Addin for basic data analysis with external data.

See Also

[lung fwrite opt. tbreg](#)

Examples

```
if (interactive()) {  
  jsBasicExtAddin()  
}
```

jsBasicGadget	<i>jsBasicGadget: Shiny Gadget of Basic Statistics in Medical Research.</i>
---------------	---

Description

Shiny Gadget including Data, Label info, Table 1, Regression(linear, logistic), Basic plot

Usage

```
jsBasicGadget(data, nfactor.limit = 20)
```

Arguments

`data` `data`
`nfactor.limit` `nlevels` limit for categorical variables

Details

Shiny Gadget including Data, Label info, Table 1, Regression(linear, logistic), Basic plot

Value

Shiny Gadget including Data, Label info, Table 1, Regression(linear, logistic), Basic plot

Examples

```
if (interactive()) {  
  jsBasicGadget(mtcars)  
}
```

`jsPropensityAddin` *jsPropensityAddin: Rstudio addin of jsPropensityGadget*

Description

Rstudio addin of jsPropensityGadget

Usage

```
jsPropensityAddin()
```

Details

Rstudio addin of jsPropensityGadget

Value

Rstudio addin of jsPropensityGadget

See Also

[rstudio-editors](#)

Examples

```
if (interactive()) {  
  jsPropensityAddin()  
}
```

jsPropensityExtAddin *jsPropensityExtAddin: RStudio Addin for propensity score analysis with external data.*

Description

RStudio Addin for propensity score analysis with external csv/xlsx/sas7bdat/sav/dta file.

Usage

```
jsPropensityExtAddin(nfactor.limit = 20, max.filesize = 2048)
```

Arguments

`nfactor.limit` nlevels limit for categorical variables, Default: 20
`max.filesize` Maximum file size to upload (MB), Default: 2048 (2 GB)

Details

RStudio Addin for propensity score analysis with external csv/xlsx/sas7bdat/sav/dta file.

Value

RStudio Addin for propensity score analysis with external data.

See Also

[pbc fwrite,data.table svydesign opt.tbreg](#)

Examples

```
if (interactive()) {  
  jsPropensityExtAddin()  
}
```

jsPropensityGadget *jsPropensityGadget: Shiny Gadget for propensity score analysis.*

Description

Shiny Gadget including original/matching/IPTW data, Label info, Table 1, Cox model, Basic/kaplan-meier plot.

Usage

```
jsPropensityGadget(data, nfactor.limit = 20)
```

Arguments

`data` `data`
`nfactor.limit` `nlevels` limit for categorical variables, Default: 20

Details

Shiny Gadget including original/matching/IPTW data, Label info, Table 1, Cox model, Basic/kaplan-meier plot.

Value

Shiny Gadget including original/matching/IPTW data, Label info, Table 1, Cox model, Basic/kaplan-meier plot.

See Also

[data.table::matchit](#), [match.data](#), [cox2::display](#), [svycox::display](#), [survfit](#), [coxph](#), [Surv](#), [jskm](#), [svyjskm](#), [ggsave](#), [svykm](#)

Examples

```
if (interactive()) {
  jsPropensityGadget(mtcars)
}
```

`jsRepeatedAddin` *jsRepeatedAddin: Rstudio addin of jsRepeatedGadget*

Description

Rstudio addin of jsRepeatedGadget

Usage

```
jsRepeatedAddin()
```

Details

Rstudio addin of jsRepeatedGadget

Value

Rstudio addin of jsRepeatedGadget

See Also

[rstudio-editors](#)

Examples

```
if (interactive()) {  
  jsRepeatedAddin()  
}
```

jsRepeatedExtAddin *jsRepeatedExtAddin: RStudio Addin for repeated measure analysis with external data.*

Description

RStudio Addin for repeated measure analysis with external csv/xlsx/sas7bdat/sav/dta file.

Usage

```
jsRepeatedExtAddin(nfactor.limit = 20, max.filesize = 2048)
```

Arguments

`nfactor.limit` nlevels limit for categorical variables, Default: 20
`max.filesize` Maximum file size to upload (MB), Default: 2048 (2 GB)

Details

RStudio Addin for repeated measure analysis with external csv/xlsx/sas7bdat/sav/dta file.

Value

RStudio Addin for repeated measure analysis with external data.

See Also

[fwrite](#) [colon](#) [opt.tbreg](#)

Examples

```
if (interactive()) {  
  jsRepeatedExtAddin()  
}
```

jsRepeatedGadget	<i>jsRepeatedGadget: Shiny Gadget of Repeated measure analysis.</i>
------------------	---

Description

Shiny Gadget including Data, Label info, Table 1, GEE(linear, logistic), Basic plot

Usage

```
jsRepeatedGadget(data, nfactor.limit = 20)
```

Arguments

data	data
nfactor.limit	nlevels limit for categorical variables

Details

Shiny Gadget including Data, Label info, Table 1, GEE(linear, logistic), Basic plot

Value

Shiny Gadget including Data, Label info, Table 1, GEE(linear, logistic), Basic plot

Examples

```
if (interactive()) {
  jsRepeatedGadget(mtcars)
}
```

jsSurveyAddin	<i>jsSurveyAddin: Rstudio addin of jsSurveyGadget</i>
---------------	---

Description

Rstudio addin of jsSurveyGadget

Usage

```
jsSurveyAddin()
```

Details

Rstudio addin of jsSurveyGadget

Value

Rstudio addin of jsSurveyGadget

See Also

[rstudio-editors](#)

Examples

```
if (interactive()) {  
  jsSurveydAddin()  
}
```

jsSurveyExtAddin	<i>jsSurveyExtAddin: RStudio Addin for survey data analysis with external data.</i>
------------------	---

Description

RStudio Addin for survey data analysis with external csv/xlsx/sas7bdat/sav/dta file.

Usage

```
jsSurveyExtAddin(nfactor.limit = 20, max.filesize = 2048)
```

Arguments

`nfactor.limit` nlevels limit for categorical variables, Default: 20
`max.filesize` Maximum file size to upload (MB), Default: 2048 (2 GB)

Details

RStudio Addin for survey data analysis with external csv/xlsx/sas7bdat/sav/dta file.

Value

RStudio Addin for survey data analysis with external data.

See Also

[fwrite opt.tb1,opt.tbreg](#)

Examples

```
if (interactive()) {  
  jsSurveyExtAddin()  
}
```

jsSurveyGadget	<i>jsSurveyGadget: Shiny Gadget of survey data analysis.</i>
----------------	--

Description

Shiny Gadget including Data, Label info, Table 1, svyglm, Basic plot

Usage

```
jsSurveyGadget(data, nfactor.limit = 20)
```

Arguments

data	data
nfactor.limit	nlevels limit for categorical variables

Details

Shiny Gadget including Data, Label info, Table 1, svyglm, Basic plot

Value

Shiny Gadget including Data, Label info, Table 1, svyglm, Basic plot

Examples

```
if (interactive()) {  
  jsSurveyGadget(mtcars)  
}
```

kaplanModule	<i>kaplanModule: shiny module server for kaplan-meier plot.</i>
--------------	---

Description

Shiny module server for kaplan-meier plot.

Usage

```
kaplanModule(  
  input,  
  output,  
  session,  
  data,  
  data_label,  
  data_varStruct = NULL,
```



```

    nfactor.limit = 10,
    design.survey = NULL,
    id.cluster = NULL,
    timeby = NULL,
    range.x = NULL,
    range.y = NULL
  )

```

Arguments

input	input
output	output
session	session
data	Reactive data
data_label	Reactive data label
data_varStruct	Reactive List of variable structure, Default: NULL
nfactor.limit	nlevels limit in factor variable, Default: 10
design.survey	Reactive survey data. default: NULL
id.cluster	Reactive cluster variable if marginal model, Default: NULL
timeby	timeby, Default: NULL
range.x	range of x axis, Default: NULL
range.y	range of y axis, Default: NULL

Details

Shiny module server for kaplan-meier plot.

Value

Shiny module server for kaplan-meier plot.

Examples

```

library(shiny)
library(DT)
library(data.table)
library(jstable)
library(ggplot2)
ui <- fluidPage(
  sidebarLayout(
    sidebarPanel(
      kaplanUI("kaplan")
    ),
    mainPanel(
      plotOutput("kaplan_plot"),
      ggplotdownUI("kaplan")
    )
  )

```

```
)
)

server <- function(input, output, session) {
  data <- reactive(mtcars)
  data.label <- reactive(jstable::mk.lev(mtcars))

  out_kaplan <- callModule(kaplanModule, "kaplan",
    data = data, data_label = data.label,
    data_varStruct = NULL
  )

  output$kaplan_plot <- renderPlot({
    print(out_kaplan())
  })
}
```

kaplanUI

kaplanUI: shiny module UI for kaplan-meier plot

Description

Shiny module UI for kaplan-meier plot

Usage

```
kaplanUI(id)
```

Arguments

id id

Details

Shiny module UI for kaplan-meier plot

Value

Shiny module UI for kaplan-meier plot

Examples

```
library(shiny)
library(DT)
library(data.table)
library(jstable)
library(ggplot2)
ui <- fluidPage(
  sidebarLayout(
    sidebarPanel(
```

```

      kaplanUI("kaplan")
    ),
    mainPanel(
      plotOutput("kaplan_plot"),
      ggplotdownUI("kaplan")
    )
  )
)

server <- function(input, output, session) {
  data <- reactive(mtcars)
  data.label <- reactive(jstable::mk.lev(mtcars))

  out_kaplan <- callModule(kaplanModule, "kaplan",
    data = data, data_label = data.label,
    data_varStruct = NULL
  )

  output$kaplan_plot <- renderPlot({
    print(out_kaplan())
  })
}

```

lineServer

lineServer: shiny module server for lineplot.

Description

Shiny module server for lineplot.

Usage

```
lineServer(id, data, data_label, data_varStruct = NULL, nfactor.limit = 10)
```

Arguments

id	id
data	Reactive data
data_label	Reactive data label
data_varStruct	Reactive List of variable structure, Default: NULL
nfactor.limit	nlevels limit in factor variable, Default: 10

Details

Shiny module server for lineplot.

Value

Shiny module server for lineplot.

Examples

```
library(shiny)
library(ggplot2)
library(ggpubr)
ui <- fluidPage(
  sidebarLayout(
    sidebarPanel(
      lineUI("line")
    ),
    mainPanel(
      optionUI("line"),
      plotOutput("line_plot"),
      ggplotdownUI("line")
    )
  )
)

server <- function(input, output, session) {
  data <- reactive(mtcars)
  data.label <- reactive(jstable::mk.lev(mtcars))

  out_line <- lineServer("line",
    data = data, data_label = data.label,
    data_varStruct = NULL
  )

  output$line_plot <- renderPlot({
    print(out_line())
  })
}
```

lineUI

lineUI: shiny module UI for lineplot

Description

Shiny module UI for lineplot

Usage

```
lineUI(id, label = "lineplot")
```

Arguments

id	id
label	label

Details

Shiny module UI for lineplot

Value

Shiny module UI for lineplot

Examples

```
library(shiny)
library(ggplot2)
library(ggpubr)
ui <- fluidPage(
  sidebarLayout(
    sidebarPanel(
      lineUI("line")
    ),
    mainPanel(
      optionUI("line"),
      plotOutput("line_plot"),
      ggplotdownUI("line")
    )
  )
)

server <- function(input, output, session) {
  data <- reactive(mtcars)
  data.label <- reactive(jstable::mk.lev(mtcars))

  out_line <- lineServer("line",
    data = data, data_label = data.label,
    data_varStruct = NULL
  )

  output$line_plot <- renderPlot({
    print(out_line())
  })
}
```

logistic.display2

logistic.display2: Modified epiDisplay's logistic.display function.

Description

Modified epiDisplay's logistic.display function for reactive data.

Usage

```
logistic.display2(
  logistic.model,
  alpha = 0.05,
  crude = TRUE,
  crude.p.value = FALSE,
```

```

    decimal = 2,
    simplified = FALSE
  )

```

Arguments

```

logistic.model  glm object(binomial)
alpha           alpha, Default: 0.05
crude           crude, Default: TRUE
crude.p.value   crude.p.value, Default: FALSE
decimal         decimal, Default: 2
simplified      simplified, Default: FALSE

```

Details

Modified `epiDisplay`'s `logistic.display` function for reactive data.

Value

logistic table

Examples

```

model1 <- glm(am ~ cyl + disp, data = mtcars, family = binomial)
logistic.display2(model1, crude = TRUE, crude.p.value = TRUE, decimal = 3)

```

logisticModule2	<i>logisticModule2: Shiny module server for logistic regression for reactive data.</i>
-----------------	--

Description

Shiny module server for logistic regression for reactive data.

Usage

```

logisticModule2(
  input,
  output,
  session,
  data,
  data_label,
  data_varStruct = NULL,
  nfactor.limit = 10,
  design.survey = NULL,
  default.unires = T,
  limit.unires = 20
)

```

Arguments

input	input
output	output
session	session
data	reactive data
data_label	reactive data label
data_varStruct	List of variable structure, Default: NULL
nfactor.limit	nlevels limit in factor variable, Default: 10
design.survey	reactive survey data. default: NULL
default.unires	Set default independent variables using univariate analysis, Default: T
limit.unires	Change to default.unires = F if number of independent variables > limit.unires, Default: 20

Details

Shiny module server for logistic regression.

Value

Shiny module server for logistic regression.

Examples

```
library(shiny)
library(DT)
library(data.table)
library(jstable)
ui <- fluidPage(
  sidebarLayout(
    sidebarPanel(
      regressModuleUI("logistic")
    ),
    mainPanel(
      DTOutput("logistictable")
    )
  )
)

server <- function(input, output, session) {
  data <- reactive(mtcars)
  data.label <- reactive(jstable::mk.lev(mtcars))

  out_logistic <- callModule(logisticModule2, "logistic",
    data = data, data_label = data.label,
    data_varStruct = NULL
  )

  output$logistictable <- renderDT({
```

```

    datatable(out_logistic())$table, rownames = T, caption = out_logistic()$caption)
  })
}

```

mk.lev2	<i>mk.lev2: level generating function</i>
---------	---

Description

make level for sav files with labels pre defined from SPSS

Usage

```
mk.lev2(out.old, out.label)
```

Arguments

out.old	raw data
out.label	pre-defined label data

Value

out.label data labels updated

mklist	<i>mklist: function to make variable list Including specific variables.</i>
--------	---

Description

Function to make variable list Including specific variables.

Usage

```
mklist(varlist, vars)
```

Arguments

varlist	Original variable list.
vars	variable to include.

Details

Internal function

Value

variable list Including specific variables.

Examples

```
data_varStruct <- list(variable = names(mtcars))
mklist(data_varStruct, names(mtcars))
```

mksetdiff	<i>mksetdiff: function to make variable list excluding specific variables.</i>
-----------	--

Description

Function to make variable list excluding specific variables.

Usage

```
mksetdiff(varlist, vars)
```

Arguments

varlist	Original variable list
vars	variable to exclude.

Details

Internal function

Value

variable list excluding specific variables.

Examples

```
data_varStruct <- list(variable = names(mtcars))
mksetdiff(data_varStruct, "mpg")
```

optionUI	<i>optionUI: Option UI with icon</i>
----------	--------------------------------------

Description

Option UI with icon

Usage

```
optionUI(id)
```

Arguments

id	id
----	----

Details

Option UI with icon

Value

Option UI with icon

See Also

[dropdownButton](#), [tooltipOptions](#)

Examples

```
library(shiny)
library(DT)
library(data.table)
library(jstable)
library(ggplot2)
ui <- fluidPage(
  sidebarLayout(
    sidebarPanel(
      kaplanUI("kaplan")
    ),
    mainPanel(
      optionUI("kaplan"),
      plotOutput("kaplan_plot"),
      ggplotdownUI("kaplan")
    )
  )
)

server <- function(input, output, session) {
  data <- reactive(mtcars)
  data.label <- reactive(jstable::mk.lev(mtcars))

  out_kaplan <- callModule(kaplanModule, "kaplan",
    data = data, data_label = data.label,
    data_varStruct = NULL
  )

  output$kaplan_plot <- renderPlot({
    print(out_kaplan())
  })
}
```

Description

Modified function of PredictABEL::reclassification: return output table

Usage

```
reclassificationJS(
  data,
  cOutcome,
  predrisk1,
  predrisk2,
  cutoff,
  dec.value = 3,
  dec.p = 3
)
```

Arguments

data	Data frame or matrix that includes the outcome and predictors variables.
cOutcome	Column number of the outcome variable.
predrisk1	Vector of predicted risks of all individuals using initial model.
predrisk2	Vector of predicted risks of all individuals using updated model.
cutoff	Cutoff values for risk categories. Define the cut-off values. Ex: c(0,.20,.30,1)
dec.value	digits of value, Default: 4
dec.p	digits of p, Default: 3

Details

Modified function of PredictABEL::reclassification

Value

Table including NRI(categorical), NRI(continuous), IDI with 95

See Also

[rcorrp.cens](#)

Examples

```
m1 <- glm(vs ~ am + gear, data = mtcars, family = binomial)
m2 <- glm(vs ~ am + gear + wt, data = mtcars, family = binomial)
reclassificationJS(
  data = mtcars, cOutcome = 8,
  predrisk1 = predict(m1, type = "response"),
  predrisk2 = predict(m2, type = "response"), cutoff = c(0, .20, .40, 1)
)
```

regress.display2 *regress.display2: modified epiDisplay's regress.display function*

Description

regress.display function for reactive data

Usage

```
regress.display2(  
  regress.model,  
  alpha = 0.05,  
  crude = FALSE,  
  crude.p.value = FALSE,  
  decimal = 2,  
  simplified = FALSE  
)
```

Arguments

regress.model	lm object
alpha	alpha, Default: 0.05
crude	crude, Default: FALSE
crude.p.value	crude.p.value, Default: FALSE
decimal	decimal, Default: 2
simplified	simplified, Default: FALSE

Details

regress.display function for reactive data

Value

regress table

Examples

```
model1 <- glm(mpg ~ cyl + disp + vs, data = mtcars)  
regress.display2(model1, crude = TRUE, crude.p.value = TRUE, decimal = 3)
```

regressModule2	<i>regressModule2: Shiny modulde server for linear regression for reactive data.</i>
----------------	--

Description

Shiny modulde server for linear regression for reactive data.

Usage

```
regressModule2(
  input,
  output,
  session,
  data,
  data_label,
  data_varStruct = NULL,
  nfactor.limit = 10,
  design.survey = NULL,
  default.unires = T,
  limit.unires = 20
)
```

Arguments

input	input
output	output
session	session
data	reactive data
data_label	reactive data label
data_varStruct	List of variable structure, Default: NULL
nfactor.limit	nlevels limit in factor variable, Default: 10
design.survey	reactive survey data. default: NULL
default.unires	Set default independent variables using univariate analysis, Default: T
limit.unires	Change to default.unires = F if number of independent variables > limit.unires, Default: 20

Details

Shiny modulde server for linear regression.

Value

Shiny modulde server for linear regression.

Examples

```
library(shiny)
library(DT)
library(data.table)
library(jstable)
ui <- fluidPage(
  sidebarLayout(
    sidebarPanel(
      regressModuleUI("linear")
    ),
    mainPanel(
      DTOutput("lineartable")
    )
  )
)

server <- function(input, output, session) {
  data <- reactive(mtcars)
  data.label <- reactive(jstable::mk.lev(mtcars))

  out_linear <- callModule(regressModule2, "linear",
    data = data, data_label = data.label,
    data_varStruct = NULL
  )

  output$lineartable <- renderDT({
    datatable(out_linear())$table, rownames = T, caption = out_linear()$caption
  })
}
```

regressModuleUI

regressModuleUI: shiny module UI for linear regression.

Description

Shiny module UI for linear regression.

Usage

```
regressModuleUI(id)
```

Arguments

id id

Details

Shiny module UI for linear regression.

Value

Shiny module UI for linear regression.

Examples

```
library(shiny)
library(DT)
library(data.table)
library(jstable)
ui <- fluidPage(
  sidebarLayout(
    sidebarPanel(
      regressModuleUI("linear")
    ),
    mainPanel(
      DTOutput("lineartable")
    )
  )
)

server <- function(input, output, session) {
  data <- reactive(mtcars)
  data.label <- reactive(jstable::mk.lev(mtcars))

  out_linear <- callModule(regressModule2, "linear",
    data = data, data_label = data.label,
    data_varStruct = NULL
  )

  output$lineartable <- renderDT({
    datatable(out_linear())$table, rownames = T, caption = out_linear()$caption
  })
}
```

rocModule

rocModule: shiny module server for roc analysis

Description

shiny module server for roc analysis

Usage

```
rocModule(
  input,
  output,
  session,
  data,
  data_label,
```

```

    data_varStruct = NULL,
    nfactor.limit = 10,
    design.survey = NULL,
    id.cluster = NULL
  )

```

Arguments

input	input
output	output
session	session
data	Reactive data
data_label	Reactive data label
data_varStruct	Reactive List of variable structure, Default: NULL
nfactor.limit	nlevels limit in factor variable, Default: 10
design.survey	Reactive survey data. default: NULL
id.cluster	Reactive cluster variable if marginal model, Default: NULL

Details

shiny module server for roc analysis

Value

shiny module server for roc analysis

See Also

[quantile](#) [setkey](#) [ggroc](#) [geeglm](#) [svyglm](#) [theme_modern](#)

Examples

```

library(shiny)
library(DT)
library(data.table)
library(jstable)
library(ggplot2)
library(pROC)
ui <- fluidPage(
  sidebarLayout(
    sidebarPanel(
      rocUI("roc")
    ),
    mainPanel(
      plotOutput("plot_roc"),
      tableOutput("cut_roc"),
      ggplotdownUI("roc"),
      DTOutput("table_roc")
    )
  )
)

```



```

    )
  )
)

server <- function(input, output, session) {
  data <- reactive(mtcars)
  data.label <- reactive(jstable::mk.lev(data1))

  out_roc <- callModule(rocModule, "roc",
    data = data, data_label = data.label,
    data_varStruct = NULL
  )

  output$plot_roc <- renderPlot({
    print(out_roc()$plot)
  })

  output$cut_roc <- renderTable({
    print(out_roc()$cut)
  })

  output$table_roc <- renderDT({
    datatable(out_roc()$tb,
      rownames = F, editable = F, extensions = "Buttons",
      caption = "ROC results",
      options = c(jstable::opt.tbreg("roctable"), list(scrollX = TRUE))
    )
  })
}

```

rocModule2

rocModule2: shiny module server for roc analysis- input number of model as integer

Description

shiny module server for roc analysis- input number of model as integer

Usage

```

rocModule2(
  input,
  output,
  session,
  data,
  data_label,
  data_varStruct = NULL,
  nfactor.limit = 10,
  design.survey = NULL,
  id.cluster = NULL
)

```

Arguments

input	input
output	output
session	session
data	Reactive data
data_label	Reactive data label
data_varStruct	Reactive List of variable structure, Default: NULL
nfactor.limit	nlevels limit in factor variable, Default: 10
design.survey	Reactive survey data. default: NULL
id.cluster	Reactive cluster variable if marginal model, Default: NULL

Details

shiny module server for roc analysis- input number of model as integer

Value

shiny module server for roc analysis- input number of model as integer

See Also

[quantile](#) [setkey](#) [ggroc](#) [geeglm](#) [svyglm](#) [theme_modern](#)

Examples

```
library(shiny)
library(DT)
library(data.table)
library(jstable)
library(ggplot2)
library(pROC)
ui <- fluidPage(
  sidebarLayout(
    sidebarPanel(
      rocUI("roc")
    ),
    mainPanel(
      plotOutput("plot_roc"),
      tableOutput("cut_roc"),
      ggplotdownUI("roc"),
      DTOutput("table_roc")
    )
  )
)

server <- function(input, output, session) {
  data <- reactive(mtcars)
  data.label <- reactive(jstable::mk.lev(data1))
}
```

```
out_roc <- callModule(rocModule2, "roc",
  data = data, data_label = data.label,
  data_varStruct = NULL
)

output$plot_roc <- renderPlot({
  print(out_roc())$plot
})

output$cut_roc <- renderTable({
  print(out_roc())$cut
})

output$table_roc <- renderDT({
  datatable(out_roc())$tb,
  rownames = F, editable = F, extensions = "Buttons",
  caption = "ROC results",
  options = c(jstable::opt.tbreg("roctable"), list(scrollX = TRUE))
})
}
```

rocUI

rocUI: shiny module UI for roc analysis

Description

Shiny module UI for roc analysis

Usage

```
rocUI(id)
```

Arguments

id id

Details

Shiny module UI for roc analysis

Value

Shiny module UI for roc analysis

Examples

```

library(shiny)
library(DT)
library(data.table)
library(jstable)
library(ggplot2)
library(pROC)
ui <- fluidPage(
  sidebarLayout(
    sidebarPanel(
      rocUI("roc")
    ),
    mainPanel(
      plotOutput("plot_roc"),
      tableOutput("cut_roc"),
      ggplotdownUI("roc"),
      DTOutput("table_roc")
    )
  )
)

server <- function(input, output, session) {
  data <- reactive(mtcars)
  data.label <- reactive(jstable::mk.lev(data1))

  out_roc <- callModule(rocModule, "roc",
    data = data, data_label = data.label,
    data_varStruct = NULL
  )

  output$plot_roc <- renderPlot({
    print(out_roc())$plot
  })

  output$cut_roc <- renderTable({
    print(out_roc())$cut
  })

  output$table_roc <- renderDT({
    datatable(out_roc())$tb,
    rownames = F, editable = F, extensions = "Buttons",
    caption = "ROC results",
    options = c(jstable::opt.tbreg("roctable"), list(scrollX = TRUE))
  })
}

```

ROC_table

ROC_table: extract AUC, NRI and IDI information from list of roc object in pROC packages.

Description

extract AUC, NRI and IDI information from list of roc in pROC packages

Usage

```
ROC_table(ListModel, dec.auc = 3, dec.p = 3)
```

Arguments

ListModel	list of roc object
dec.auc	digits for AUC, Default: 3
dec.p	digits for p value, Default: 3

Details

extract AUC, NRI and IDI information from list of roc object in pROC packages.

Value

table of AUC, NRI and IDI information

See Also

[ci.auc,roc.test.data.table](#), [rbindlist](#)

Examples

```
library(pROC)
m1 <- glm(vs ~ am + gear, data = mtcars, family = binomial)
m2 <- glm(vs ~ am + gear + wt, data = mtcars, family = binomial)
m3 <- glm(vs ~ am + gear + wt + mpg, data = mtcars, family = binomial)
roc1 <- roc(m1$y, predict(m1, type = "response"))
roc2 <- roc(m2$y, predict(m2, type = "response"))
roc3 <- roc(m3$y, predict(m3, type = "response"))
list.roc <- list(roc1, roc2, roc3)
ROC_table(list.roc)
```

 scatterServer

scatterServer: shiny module server for scatterplot.

Description

Shiny module server for scatterplot.

Usage

```
scatterServer(id, data, data_label, data_varStruct = NULL, nfactor.limit = 10)
```

Arguments

id	id
data	Reactive data
data_label	Reactive data label
data_varStruct	Reactive List of variable structure, Default: NULL
nfactor.limit	nlevels limit in factor variable, Default: 10

Details

Shiny module server for scatterplot.

Value

Shiny module server for scatterplot.

Examples

```
library(shiny)
library(ggplot2)
library(ggpubr)
ui <- fluidPage(
  sidebarLayout(
    sidebarPanel(
      scatterUI("scatter")
    ),
    mainPanel(
      plotOutput("scatter_plot"),
      ggplotdownUI("scatter")
    )
  )
)

server <- function(input, output, session) {
  data <- reactive(mtcars)
  data.label <- reactive(jstable::mk.lev(mtcars))

  out_scatter <- scatterServer("scatter",
    data = data, data_label = data.label,
    data_varStruct = NULL
  )

  output$scatter_plot <- renderPlot({
    print(out_scatter())
  })
}
```

`scatterUI`*scatterUI: shiny module UI for scatterplot*

Description

Shiny module UI for scatterplot

Usage

```
scatterUI(id, label = "scatterplot")
```

Arguments

<code>id</code>	<code>id</code>
<code>label</code>	<code>label</code>

Details

Shiny module UI for scatterplot

Value

Shiny module UI for scatterplot

Examples

```
library(shiny)
library(ggplot2)
library(ggpubr)
ui <- fluidPage(
  sidebarLayout(
    sidebarPanel(
      scatterUI("scatter")
    ),
    mainPanel(
      plotOutput("scatter_plot"),
      ggplotdownUI("scatter")
    )
  )
)

server <- function(input, output, session) {
  data <- reactive(mtcars)
  data.label <- reactive(jstable::mk.lev(mtcars))

  out_scatter <- scatterServer("scatter",
    data = data, data_label = data.label,
    data_varStruct = NULL
  )
}
```

```
output$scatter_plot <- renderPlot({
  print(out_scatter())
})
}
```

survIDINRI_helper	<i>survIDINRI_helper: Helper function for IDI.INF.OUT in survIDINRI packages</i>
-------------------	--

Description

Helper function for IDI.INF.OUT in survIDINRI packages

Usage

```
survIDINRI_helper(
  var.event,
  var.time,
  list.vars.ind,
  t,
  data,
  dec.auc = 3,
  dec.p = 3,
  id.cluster = NULL
)
```

Arguments

var.event	event
var.time	time
list.vars.ind	list of independent variable
t	time
data	data
dec.auc	digits for AUC, Default: 3
dec.p	digits for p value, Default: 3
id.cluster	cluster variable if marginal model, Default: NULL

Details

Helper function for IDI.INF.OUT in survIDINRI packages

Value

IDI, NRI

See Also

[data.table model.matrix coxph Surv IDI.INF.OUT IDI.INF](#)

Examples

```
# library(survival)
# survIDINRI_helper("status", "time", list.vars.ind = list("age", c("age", "sex")),
#                   t = 365, data = lung)
```

tb1module	<i>tb1module: table 1 shiny module server.</i>
-----------	--

Description

Table 1 shiny module server for descriptive statistics.

Usage

```
tb1module(
  input,
  output,
  session,
  data,
  data_label,
  data_varStruct = NULL,
  nfactor.limit = 10,
  design.survey = NULL,
  showAllLevels = T,
  argsExact = list(workspace = 2 * 10^7, simulate.p.value = T)
)
```

Arguments

input	input
output	output
session	session
data	Data
data_label	Data label
data_varStruct	Variable structure list of data, Default: NULL
nfactor.limit	maximum factor levels to include, Default: 10
design.survey	survey data of survey package. default: NULL
showAllLevels	Show All label information with 2 categorical variables, Default: T
argsExact	Option for Fisher exact test memory limit.

Details

Table 1 shiny module server for descriptive statistics.

Value

Table 1 shiny module server for descriptive statistics.

Examples

```

library(shiny)
library(DT)
library(data.table)
library(jstable)
ui <- fluidPage(
  sidebarLayout(
    sidebarPanel(
      tb1moduleUI("tb1")
    ),
    mainPanel(
      DTOutput("table1")
    )
  )
)

server <- function(input, output, session) {
  data <- mtcars
  data.label <- jstable::mk.lev(mtcars)

  out_tb1 <- callModule(tb1module, "tb1",
    data = data, data_label = data.label,
    data_varStruct = NULL
  )

  output$table1 <- renderDT({
    tb <- out_tb1()$table
    cap <- out_tb1()$caption
    out.tb1 <- datatable(tb, rownames = T, extension = "Buttons", caption = cap)
    return(out.tb1)
  })
}

```

 tb1module2

tb1module2: table 1 shiny module server for reactive data.

Description

Table 1 shiny module server for descriptive statistics for reactive data.

Usage

```
tb1module2(
  input,
  output,
  session,
  data,
  data_label,
  data_varStruct = NULL,
  nfactor.limit = 10,
  design.survey = NULL,
  showAllLevels = T,
  argsExact = list(workspace = 2 * 10^7, simulate.p.value = T)
)
```

Arguments

input	input
output	output
session	session
data	Reactive data
data_label	Reactive data label
data_varStruct	Variable structure list of data, Default: NULL
nfactor.limit	maximum factor levels to include, Default: 10
design.survey	Reactive survey data of survey package. Default: NULL
showAllLevels	Show All label information with 2 categorical variables, Default: T
argsExact	Option for Fisher exact test memory limit.

Details

Table 1 shiny module server for descriptive statistics.

Value

Table 1 shiny module server for descriptive statistics.

Examples

```
library(shiny)
library(DT)
library(data.table)
library(jstable)
ui <- fluidPage(
  sidebarLayout(
    sidebarPanel(
      tb1moduleUI("tb1")
    ),
    mainPanel(
```

```

      DTOutput("table1")
    )
  )
)

server <- function(input, output, session) {
  data <- reactive(mtcars)
  data.label <- reactive(jstable::mk.lev(mtcars))

  out_tb1 <- callModule(tb1module2, "tb1",
    data = data, data_label = data.label,
    data_varStruct = NULL
  )

  output$table1 <- renderDT({
    tb <- out_tb1()$table
    cap <- out_tb1()$caption
    out.tb1 <- datatable(tb, rownames = T, extension = "Buttons", caption = cap)
    return(out.tb1)
  })
}

```

 tb1moduleUI

tb1moduleUI: table 1 module UI.

Description

Table 1 shiny module UI for descriptive statistics.

Usage

```
tb1moduleUI(id)
```

Arguments

id	id
----	----

Details

Table 1 shiny module UI for descriptive statistics.

Value

Table 1 module UI.

Examples

```
library(shiny)
library(DT)
library(data.table)
library(jstable)
ui <- fluidPage(
  sidebarLayout(
    sidebarPanel(
      tb1moduleUI("tb1")
    ),
    mainPanel(
      DTOutput("table1")
    )
  )
)

server <- function(input, output, session) {
  data <- reactive(mtcars)
  data.label <- reactive(jstable::mk.lev(mtcars))

  out_tb1 <- callModule(tb1module2, "tb1",
    data = data, data_label = data.label,
    data_varStruct = NULL
  )

  output$table1 <- renderDT({
    tb <- out_tb1()$table
    cap <- out_tb1()$caption
    out.tb1 <- datatable(tb, rownames = T, extension = "Buttons", caption = cap)
    return(out.tb1)
  })
}
```

tb1simple

tb1simple: tb1 module server for propensity score analysis

Description

Table 1 module server for propensity score analysis

Usage

```
tb1simple(
  input,
  output,
  session,
  data,
  matdata,
  data_label,
```

```

    data_varStruct = NULL,
    group_var,
    showAllLevels = T
  )

```

Arguments

input	input
output	output
session	session
data	Original data with propensity score
matdata	Matching data
data_label	Data label
data_varStruct	List of variable structure, Default: NULL
group_var	Group variable to run propensity score analysis.
showAllLevels	Show All label information with 2 categorical variables, Default: T

Details

Table 1 module server for propensity score analysis

Value

Table 1 with original data/matching data/IPTW data

See Also

[var_label CreateTableOneJS svydesign](#)

Examples

```

library(shiny)
library(DT)
library(data.table)
library(readxl)
library(jstable)
library(haven)
library(survey)
ui <- fluidPage(
  sidebarLayout(
    sidebarPanel(
      FilePsInput("datafile"),
      tb1simpleUI("tb1")
    ),
    mainPanel(
      DTOutput("table1_original"),
      DTOutput("table1_ps"),
      DTOutput("table1_iptw")
    )
  )

```

```

)
)

server <- function(input, output, session) {
  mat.info <- callModule(FilePs, "datafile")

  data <- reactive(mat.info())$data
  matdata <- reactive(mat.info())$matdata
  data.label <- reactive(mat.info())$data.label

  vlist <- eventReactive(mat.info(), {
    mklist <- function(varlist, vars) {
      lapply(
        varlist,
        function(x) {
          inter <- intersect(x, vars)
          if (length(inter) == 1) {
            inter <- c(inter, "")
          }
          return(inter)
        }
      )
    }
  })
  factor_vars <- names(data())[data()[, lapply(.SD, class) %in% c("factor", "character")]]
  factor_list <- mklist(data_varStruct(), factor_vars)
  conti_vars <- setdiff(names(data()), c(factor_vars, "pscore", "iptw"))
  conti_list <- mklist(data_varStruct(), conti_vars)
  nclass_factor <- unlist(data()[, lapply(.SD, function(x) {
    length(unique(x)[!is.na(unique(x))])
  })],
  .SDcols = factor_vars
  ])
  class01_factor <- unlist(data()[, lapply(.SD, function(x) {
    identical(levels(x), c("0", "1"))
  })],
  .SDcols = factor_vars
  ])
  validate(
    need(!is.null(class01_factor), "No categorical variables coded as 0, 1 in data")
  )
  factor_01vars <- factor_vars[class01_factor]
  factor_01_list <- mklist(data_varStruct(), factor_01vars)
  group_vars <- factor_vars[nclass_factor >= 2 & nclass_factor <= 10 &
    nclass_factor < nrow(data())]
  group_list <- mklist(data_varStruct(), group_vars)
  except_vars <- factor_vars[nclass_factor > 10 | nclass_factor == 1 |
    nclass_factor == nrow(data())]

  ## non-normal: shapiro test
  f <- function(x) {
    if (diff(range(x, na.rm = T)) == 0) {
      return(F)
    }
  }
}

```

```

    } else {
      return(shapiro.test(x)$p.value <= 0.05)
    }
  }

  non_normal <- ifelse(nrow(data()) <= 3 | nrow(data()) >= 5000,
    rep(F, length(conti_vars)),
    sapply(conti_vars, function(x) {
      f(data()[[x]])
    })
  )
  return(list(
    factor_vars = factor_vars, factor_list = factor_list, conti_vars = conti_vars,
    conti_list = conti_list, factor_01vars = factor_01vars,
    factor_01_list = factor_01_list, group_list = group_list,
    except_vars = except_vars, non_normal = non_normal
  ))
})

out.tb1 <- callModule(tb1simple2, "tb1",
  data = data, matdata = matdata, data_label = data.label,
  data_varStruct = NULL, vlist = vlist,
  group_var = reactive(mat.info())$group_var
)

output$table1_original <- renderDT({
  tb <- out.tb1()$original$table
  cap <- out.tb1()$original$caption
  out <- datatable(tb, rownames = T, extension = "Buttons", caption = cap)
  return(out)
})

output$table1_ps <- renderDT({
  tb <- out.tb1()$ps$table
  cap <- out.tb1()$ps$caption
  out <- datatable(tb, rownames = T, extension = "Buttons", caption = cap)
  return(out)
})

output$table1_iptw <- renderDT({
  tb <- out.tb1()$iptw$table
  cap <- out.tb1()$iptw$caption
  out <- datatable(tb, rownames = T, extension = "Buttons", caption = cap)
  return(out)
})
}

```


Description

tb1 module for propensity score analysis for reactive data

Usage

```
tb1simple2(  
  input,  
  output,  
  session,  
  data,  
  matdata,  
  data_label,  
  data_varStruct = NULL,  
  vlist,  
  group_var,  
  showAllLevels = T  
)
```

Arguments

input	input
output	output
session	session
data	Original reactive data with propensity score
matdata	Matching reactive data
data_label	Reactive data label
data_varStruct	List of variable structure, Default: NULL
vlist	List including factor/continuous/binary/except/non-normal variables
group_var	Group variable to run propensity score analysis.
showAllLevels	Show All label information with 2 categorical variables, Default: T

Details

Table 1 module server for propensity score analysis

Value

Table 1 with original data/matching data/IPTW data

See Also

[CreateTableOneJS svydesign](#)

Examples

```

library(shiny)
library(DT)
library(data.table)
library(readxl)
library(jstable)
library(haven)
library(survey)
ui <- fluidPage(
  sidebarLayout(
    sidebarPanel(
      FilePsInput("datafile"),
      tb1simpleUI("tb1")
    ),
    mainPanel(
      DTOutput("table1_original"),
      DTOutput("table1_ps"),
      DTOutput("table1_ipwt")
    )
  )
)

server <- function(input, output, session) {
  mat.info <- callModule(FilePs, "datafile")

  data <- reactive(mat.info())$data
  matdata <- reactive(mat.info())$matdata
  data.label <- reactive(mat.info())$data.label

  vlist <- eventReactive(mat.info(), {
    mklist <- function(varlist, vars) {
      lapply(
        varlist,
        function(x) {
          inter <- intersect(x, vars)
          if (length(inter) == 1) {
            inter <- c(inter, "")
          }
          return(inter)
        }
      )
    }
  })
  factor_vars <- names(data())[data()[, lapply(.SD, class) %in% c("factor", "character")]]
  factor_list <- mklist(data_varStruct(), factor_vars)
  conti_vars <- setdiff(names(data()), c(factor_vars, "pscore", "iptw"))
  conti_list <- mklist(data_varStruct(), conti_vars)
  nclass_factor <- unlist(data()[, lapply(.SD, function(x) {
    length(unique(x)[!is.na(unique(x)])])
  })],
  .SDcols = factor_vars
  ])
}

```

```

class01_factor <- unlist(data()[, lapply(.SD, function(x) {
  identical(levels(x), c("0", "1"))
}),
.SDcols = factor_vars
])
validate(
  need(!is.null(class01_factor), "No categorical variables coded as 0, 1 in data")
)
factor_01vars <- factor_vars[class01_factor]
factor_01_list <- mklst(data_varStruct(), factor_01vars)
group_vars <- factor_vars[nclass_factor >= 2 & nclass_factor <= 10 &
  nclass_factor < nrow(data())]
group_list <- mklst(data_varStruct(), group_vars)
except_vars <- factor_vars[nclass_factor > 10 | nclass_factor == 1 |
  nclass_factor == nrow(data())]

## non-normal: shapiro test
f <- function(x) {
  if (diff(range(x, na.rm = T)) == 0) {
    return(F)
  } else {
    return(shapiro.test(x)$p.value <= 0.05)
  }
}

non_normal <- ifelse(nrow(data()) <= 3 | nrow(data()) >= 5000,
  rep(F, length(conti_vars)),
  sapply(conti_vars, function(x) {
    f(data()[[x]])
  })
)
return(list(
  factor_vars = factor_vars, factor_list = factor_list, conti_vars = conti_vars,
  conti_list = conti_list, factor_01vars = factor_01vars,
  factor_01_list = factor_01_list, group_list = group_list,
  except_vars = except_vars, non_normal = non_normal
))
})

out.tb1 <- callModule(tb1simple2, "tb1",
  data = data, matdata = matdata, data_label = data.label,
  data_varStruct = NULL, vlist = vlist,
  group_var = reactive(mat.info())$group_var
)

output$table1_original <- renderDT({
  tb <- out.tb1()$original$table
  cap <- out.tb1()$original$caption
  out <- datatable(tb, rownames = T, extension = "Buttons", caption = cap)
  return(out)
})

output$table1_ps <- renderDT({

```

```

    tb <- out.tb1()$ps$table
    cap <- out.tb1()$ps$caption
    out <- datatable(tb, rownames = T, extension = "Buttons", caption = cap)
    return(out)
  })

  output$table1_iptw <- renderDT({
    tb <- out.tb1()$iptw$table
    cap <- out.tb1()$iptw$caption
    out <- datatable(tb, rownames = T, extension = "Buttons", caption = cap)
    return(out)
  })
}

```

 tb1simpleUI

tb1simpleUI : tb1 module UI for propensity score analysis

Description

Table 1 module UI for propensity score analysis.

Usage

```
tb1simpleUI(id)
```

Arguments

```
id          id
```

Details

tb1 module UI for propensity score analysis

Value

Table 1 UI for propensity score analysis

Examples

```

library(shiny)
library(DT)
library(data.table)
library(readxl)
library(jstable)
library(haven)
library(survey)
ui <- fluidPage(
  sidebarLayout(
    sidebarPanel(
      FilePsInput("datafile"),

```

```

    tb1simpleUI("tb1")
  ),
  mainPanel(
    DTOutput("table1_original"),
    DTOutput("table1_ps"),
    DTOutput("table1_iptw")
  )
)
)
)

server <- function(input, output, session) {
  mat.info <- callModule(FilePs, "datafile")

  data <- reactive(mat.info())$data
  matdata <- reactive(mat.info())$matdata
  data.label <- reactive(mat.info())$data.label

  vlist <- eventReactive(mat.info(), {
    mklist <- function(varlist, vars) {
      lapply(
        varlist,
        function(x) {
          inter <- intersect(x, vars)
          if (length(inter) == 1) {
            inter <- c(inter, "")
          }
          return(inter)
        }
      )
    }
  })
  factor_vars <- names(data())[data()[, lapply(.SD, class) %in% c("factor", "character")]]
  factor_list <- mklist(data_varStruct(), factor_vars)
  conti_vars <- setdiff(names(data()), c(factor_vars, "pscore", "iptw"))
  conti_list <- mklist(data_varStruct(), conti_vars)
  nclass_factor <- unlist(data()[, lapply(.SD, function(x) {
    length(unique(x)[!is.na(unique(x)])])
  })],
  .SDcols = factor_vars
  ])
  class01_factor <- unlist(data()[, lapply(.SD, function(x) {
    identical(levels(x), c("0", "1"))
  })],
  .SDcols = factor_vars
  ])
  validate(
    need(!is.null(class01_factor), "No categorical variables coded as 0, 1 in data")
  )
  factor_01vars <- factor_vars[class01_factor]
  factor_01_list <- mklist(data_varStruct(), factor_01vars)
  group_vars <- factor_vars[nclass_factor >= 2 & nclass_factor <= 10 &
    nclass_factor < nrow(data())]
  group_list <- mklist(data_varStruct(), group_vars)

```

```

except_vars <- factor_vars[nclass_factor > 10 | nclass_factor == 1 |
  nclass_factor == nrow(data())]

## non-normal: shapiro test
f <- function(x) {
  if (diff(range(x, na.rm = T)) == 0) {
    return(F)
  } else {
    return(shapiro.test(x)$p.value <= 0.05)
  }
}

non_normal <- ifelse(nrow(data()) <= 3 | nrow(data()) >= 5000,
  rep(F, length(conti_vars)),
  sapply(conti_vars, function(x) {
    f(data()[[x]])
  })
)
return(list(
  factor_vars = factor_vars, factor_list = factor_list,
  conti_vars = conti_vars, conti_list = conti_list, factor_01vars = factor_01vars,
  factor_01_list = factor_01_list, group_list = group_list,
  except_vars = except_vars, non_normal = non_normal
))
})

out.tb1 <- callModule(tb1simple2, "tb1",
  data = data, matdata = matdata, data_label = data.label,
  data_varStruct = NULL, vlist = vlist,
  group_var = reactive(mat.info())$group_var
)

output$table1_original <- renderDT({
  tb <- out.tb1()$original$table
  cap <- out.tb1()$original$caption
  out <- datatable(tb, rownames = T, extension = "Buttons", caption = cap)
  return(out)
})

output$table1_ps <- renderDT({
  tb <- out.tb1()$ps$table
  cap <- out.tb1()$ps$caption
  out <- datatable(tb, rownames = T, extension = "Buttons", caption = cap)
  return(out)
})

output$table1_iptw <- renderDT({
  tb <- out.tb1()$iptw$table
  cap <- out.tb1()$iptw$caption
  out <- datatable(tb, rownames = T, extension = "Buttons", caption = cap)
  return(out)
})
}

```

timeROChelper	<i>timeROChelper: Helper function for timerocModule</i>
---------------	---

Description

Helper function for timerocModule

Usage

```
timeROChelper(  
  var.event,  
  var.time,  
  vars.ind,  
  t,  
  data,  
  design.survey = NULL,  
  id.cluster = NULL  
)
```

Arguments

var.event	event
var.time	time
vars.ind	independent variable
t	time
data	data
design.survey	survey data, Default: NULL
id.cluster	cluster variable if marginal model, Default: NULL

Details

Helper function for timerocModule

Value

timeROC and coxph object

See Also

[coxph svycoxph predict timeROC](#)

Examples

```
# library(survival)  
# timeROChelper("status", "time", c("age", "sex"), t = 365, data = lung)
```

`timerocModule`*timerocModule: shiny module server for time-dependent roc analysis*

Description

shiny module server for time-dependent roc analysis

shiny module server for time-dependent roc analysis- input number of model as integer

Usage

```
timerocModule(  
  input,  
  output,  
  session,  
  data,  
  data_label,  
  data_varStruct = NULL,  
  nfactor.limit = 10,  
  design.survey = NULL,  
  id.cluster = NULL,  
  iid = T,  
  NRIIDI = T  
)
```

```
timerocModule2(  
  input,  
  output,  
  session,  
  data,  
  data_label,  
  data_varStruct = NULL,  
  nfactor.limit = 10,  
  design.survey = NULL,  
  id.cluster = NULL,  
  iid = T,  
  NRIIDI = T  
)
```

Arguments

<code>input</code>	input
<code>output</code>	output
<code>session</code>	session
<code>data</code>	Reactive data
<code>data_label</code>	Reactive data label

<code>data_varStruct</code>	Reactive List of variable structure, Default: NULL
<code>nfactor.limit</code>	nlevels limit in factor variable, Default: 10
<code>design.survey</code>	Reactive survey data. default: NULL
<code>id.cluster</code>	Reactive cluster variable if marginal model, Default: NULL
<code>iid</code>	logical, get CI of AUC, Default: T
<code>NRIIDI</code>	logical, get NRI & IDI, Default: T

Details

shiny module server for time-dependent roc analysis

shiny module server for time dependent roc analysis- input number of model as integer

Value

shiny module server for time-dependent roc analysis

shiny module server for time dependent roc analysis- input number of model as integer

See Also

[quantile setkey data.table rbindlist](#)

[quantile setkey data.table rbindlist](#)

Examples

```
library(shiny)
library(DT)
library(data.table)
library(jstable)
library(ggplot2)
library(timeROC)
library(survIDINRI)
ui <- fluidPage(
  sidebarLayout(
    sidebarPanel(
      timerocUI("timeroc")
    ),
    mainPanel(
      plotOutput("plot_timeroc"),
      ggplotdownUI("timeroc"),
      DTOutput("table_timeroc")
    )
  )
)

server <- function(input, output, session) {
  data <- reactive(mtcars)
  data.label <- jstable::mk.lev(mtcars)

  out_timeroc <- callModule(timerocModule, "timeroc",
```

```

    data = data, data_label = data.label,
    data_varStruct = NULL
  )

  output$plot_timeroc <- renderPlot({
    print(out_timeroc())$plot
  })

  output$table_timeroc <- renderDT({
    datatable(out_timeroc())$tb,
    rownames = F, editable = F, extensions = "Buttons",
    caption = "ROC results",
    options = c(jstable::opt.tbreg("roctable"), list(scrollX = TRUE))
  })
}
library(shiny)
library(DT)
library(data.table)
library(jstable)
library(ggplot2)
library(timeroc)
library(survIDINRI)
ui <- fluidPage(
  sidebarLayout(
    sidebarPanel(
      timerocUI("timeroc")
    ),
    mainPanel(
      plotOutput("plot_timeroc"),
      ggplotdownUI("timeroc"),
      DTOutput("table_timeroc")
    )
  )
)

server <- function(input, output, session) {
  data <- reactive(mtcars)
  data.label <- jstable::mk.lev(mtcars)

  out_timeroc <- callModule(timerocModule2, "timeroc",
    data = data, data_label = data.label,
    data_varStruct = NULL
  )

  output$plot_timeroc <- renderPlot({
    print(out_timeroc())$plot
  })

  output$table_timeroc <- renderDT({
    datatable(out_timeroc())$tb,
    rownames = F, editable = F, extensions = "Buttons",
    caption = "ROC results",

```

```
      options = c(jstable::opt.tbreg("roctable"), list(scrollX = TRUE))
    )
  })
}
```

timerocUI

timerocUI: shiny module UI for time-dependent roc analysis

Description

Shiny module UI for time-dependent roc analysis

Usage

```
timerocUI(id)
```

Arguments

id id

Details

Shiny module UI for time-dependent roc analysis

Value

Shiny module UI for time-dependent roc analysis

Examples

```
library(shiny)
library(DT)
library(data.table)
library(jstable)
library(ggplot2)
library(timeROC)
library(survIDINRI)
ui <- fluidPage(
  sidebarLayout(
    sidebarPanel(
      timerocUI("timeroc")
    ),
    mainPanel(
      plotOutput("plot_timeroc"),
      ggplotdownUI("timeroc"),
      DTOutput("table_timeroc")
    )
  )
)
```

```

server <- function(input, output, session) {
  data <- reactive(mtcars)
  data.label <- jstable::mk.lev(mtcars)

  out_timeroc <- callModule(timerocModule, "timeroc",
    data = data, data_label = data.label,
    data_varStruct = NULL
  )

  output$plot_timeroc <- renderPlot({
    print(out_timeroc())$plot
  })

  output$table_timeroc <- renderDT({
    datatable(out_timeroc())$tb,
    rownames = F, editable = F, extensions = "Buttons",
    caption = "ROC results",
    options = c(jstable::opt.tbreg("roctable"), list(scrollX = TRUE))
  })
}

```

timeROC_table	<i>timeROC_table: extract AUC information from list of timeROChelper object.</i>
---------------	--

Description

extract AUC information from list of timeROChelper object.

Usage

```
timeROC_table(ListModel, dec.auc = 3, dec.p = 3)
```

Arguments

ListModel	list of timeROChelper object
dec.auc	digits for AUC, Default: 3
dec.p	digits for p value, Default: 3

Details

extract AUC information from list of timeROChelper object.

Value

table of AUC information

See Also

[confint.data.table](#)

Examples

```
# library(survival)
# list.timeROC <- lapply(list("age", c("age", "sex")),
#   function(x){
#     timeROChelper("status", "time", x, t = 365, data = lung)
#   })
# timeROC_table(list.timeROC)
```

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