

# 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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**License** Apache License 2.0

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officer, rvg, epiDisplay, forestploter

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---

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

---

## 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(
      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(
      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(
      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(
      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))

out<-mtcars
ui <- fluidPage(
  sidebarLayout(
    sidebarPanel(
      forestcoxUI('Forest')
    ),
    mainPanel(
      DTOutput('tablesub')
    )
  )
)

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()
  })
}
```

---

forestcoxUI

*forestcoxUI:shiny module UI for forestcox*

---

## Description

Shiny module UI for forestcox

## Usage

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

## Arguments

id	id
label	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))

out<-mtcars
ui <- fluidPage(
  sidebarLayout(
    sidebarPanel(
      forestcoxUI('Forest')
    ),
    mainPanel(
      DTOutput('tablesub')
    )
  )
)

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()
  })
}
```

---

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"
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(
      DTOutput('tablesub')
    )
  )
)

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='gaussian')
  output$tablesub<-renderDT({
    outtable()
  })
}

```

---

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))

out<-mtcars

ui <- fluidPage(
  sidebarLayout(
    sidebarPanel(
      forestglmUI('Forest')
    ),
    mainPanel(
      DTOutput('tablesub')
    )
  )
)

server <- function(input, output, session) {
  data<-reactive(out)
  label<-reactive(jstable::mk.lev(out))
  outtable<-forestglmServer('Forest',data=data,data_label=label,family='gaussian')
  output$tablesub<-renderDT({
    outtable()
  })
}

```

---

 GEEModuleLinear

*GEEModuleLinear: shiny modulde server for gaussian generalized estimating equation(GEE) using reactive data.*

---

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

### Value

Shiny module 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	<i>GEEModuleLogistic: shiny modulde server for binomial gaussian generalized estimating equation(GEE) using reactive data.</i>
-------------------	--

---

## Description

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

### Value

Shiny modulde 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	<i>GEEModuleUI: shiny modulde UI for generalized estimating equation(GEE).</i>
-------------	--

---

### 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

*ggpairsModule2: shiny module server for basic/scatter plot for reactive data.*

---

**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(
      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(
      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)
  })
}
```

---

mklist

*mklist: function to make variable list Including specific variables.*

---

### 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

*mksetdiff: function to make variable list excluding specific variables.*

---

### 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

*optionUI: Option UI with icon*

---

**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())
  })
}

```

---

reclassificationJS

*reclassificationJS: Function for reclassification table and statistics*


---

**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	<i>rocModule2: shiny module server for roc analysis- input number of model as integer</i>
------------	---

---

## 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**

id	id
label	label

**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

*survIDINRI\_helper: Helper function for IDI.INF.OUT in survIDINRI packages*

---

**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)
```

tblmodule

*tblmodule: table 1 shiny module server.***Description**

Table 1 shiny module server for descriptive statistics.

**Usage**

```
tblmodule(
  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 <- mklst(data_varStruct(), factor_vars)
conti_vars <- setdiff(names(data()), c(factor_vars, "pscore", "iptw"))
conti_list <- mklst(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$table1_ipw <- renderDT({
  tb <- out.tb1()$ipw$table
  cap <- out.tb1()$ipw$caption
  out <- datatable(tb, rownames = T, extension = "Buttons", caption = cap)
  return(out)
})
}

```

---

 tb1simple2

*tb1simple2: tb1 module for propensity score analysis for reactive data*


---

## 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_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**

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 <- mklst(data_varStruct(), factor_vars)
conti_vars <- setdiff(names(data()), c(factor_vars, "pscore", "iptw"))
conti_list <- mklst(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)
})
}

```

---

timeROChelper

*timeROChelper: Helper function for timerocModule*


---

## Description

Helper function for timerocModule

## Usage

```

timeROChelper(
  var.event,
  var.time,
  vars.ind,
  t,
  data,
  design.survey = NULL,

```

```
    id.cluster = NULL
  )
```

### Arguments

<code>var.event</code>	event
<code>var.time</code>	time
<code>vars.ind</code>	independent variable
<code>t</code>	time
<code>data</code>	data
<code>design.survey</code>	survey data, Default: NULL
<code>id.cluster</code>	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**

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
iid	logical, get CI of AUC, Default: T
NRIIDI	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))
  )
  })
}

```

**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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