

# 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

**URL** <https://github.com/jinseob2kim/jsmodule>

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

**Suggests** testthat, shinytest, knitr, rmarkdown

**VignetteBuilder** knitr

**NeedsCompilation** no

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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**

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

**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
})
}

```

---

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

---

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

---

**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

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

---

### Description

Shiny module UI for generalized estimating equation(GEE).

### Usage

```
GEEModuleUI(id)
```

### Arguments

id                    id

### Details

Shiny module UI for generalized estimating equation(GEE).

### Value

Shiny module 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`*jsBasicGadget: Shiny Gadget of Basic Statistics in Medical Research.*

---

**Description**

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

**Usage**

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

**Arguments**

<code>data</code>	<code>data</code>
<code>nfactor.limit</code>	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	<i>jsRepeatedAddin: Rstudio addin of jsRepeatedGadget</i>
-----------------	---

---

**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	<i>jsRepeatedExtAddin: RStudio Addin for repeated measure analysis with external data.</i>
--------------------	--

---

**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

*jsRepeatedGadget: Shiny Gadget of Repeated measure analysis.*

---

**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**

<code>nfactor.limit</code>	nlevels limit for categorical variables, Default: 20
<code>max.filesize</code>	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

*jsSurveyGadget: Shiny Gadget of survey data analysis.*

---

**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`*kaplanModule: shiny module server for kaplan-meier plot.*

---

**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**

<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>timeby</code>	timeby, Default: NULL
<code>range.x</code>	range of x axis, Default: NULL
<code>range.y</code>	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	<i>lineUI: shiny module UI for lineplot</i>
--------	---

---

### 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 modulde server for logistic regression for reactive data.</i>
-----------------	---

---

### Description

Shiny modulde 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 modulde server for logistic regression.

### Value

Shiny modulde 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	<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())
})
}

```

---

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**

[rcorrrp.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 module server for linear regression for reactive data.</i>
----------------	---

---

**Description**

Shiny module 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 module server for linear regression.

**Value**

Shiny module 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	<i>ROC_table: extract AUC, NRI and IDI information from list of roc object in pROC packages.</i>
-----------	--

---

### 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	<i>scatterServer: shiny module server for scatterplot.</i>
---------------	--

---

### 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)
```

---

tb1module

*tb1module: table 1 shiny module server.*

---

**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)
  })
}

```

**Description**

Table 1 module server for propensity score analysis

**Usage**

```
tblsimple(  
  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"),
    tblsimpleUI("tbl")
  ),
  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 <- 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)
  })
}

```

---

 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 <- 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 <- 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	<i>timerocModule: shiny module server for time-dependent roc analysis</i>
---------------	---

---

## 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))
  })
})
}

```

---

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.



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