

# Package ‘jsmodule’

June 10, 2019

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

**Version** 0.9.1

**Date** 2019-06-11

**Description**

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

**Depends** R (>= 3.4.0)

**License** Apache License 2.0

**Encoding** UTF-8

**LazyData** true

**RoxygenNote** 6.1.1

**Imports** stats, data.table, shiny, readxl, DT, jstable, labelled, methods, epiDisplay, GGally, ggplot2, haven, rstudioapi, shinycustomloader, MatchIt, survey, tableone, jskm, survival, purrr, geepack, maxstat, survC1, survIDINRI, timeROC, devEMF, graphics, grDevices, shinyWidgets, pROC, Hmisc, see

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

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

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

**VignetteBuilder** knitr

**NeedsCompilation** no

**Author** Jinseob Kim [aut, cre] (<<https://orcid.org/0000-0002-9403-605X>>), Zarathu [cph, fnd]

**Maintainer** Jinseob Kim <[jinseob2kim@gmail.com](mailto:jinseob2kim@gmail.com)>

**Repository** CRAN

**Date/Publication** 2019-06-10 19:30:07 UTC

**R topics documented:**

coxModule	3
coxUI	4
csvFile	5
csvFileInput	6
FilePs	7
FilePsInput	8
FileRepeated	9
FileRepeatedInput	11
FileSurvey	12
FileSurveyInput	13
GEEModuleLinear	14
GEEModuleLogistic	15
GEEModuleUI	17
ggpairsModule	18
ggpairsModule2	19
ggpairsModuleUI1	20
ggpairsModuleUI2	22
ggplotdownUI	23
jsBasicAddin	24
jsBasicGadget	24
jsPropensityAddin	25
jsPropensityGadget	26
jsRepeatedAddin	27
jsRepeatedGadget	27
jsSurveydAddin	28
jsSurveyGadget	29
kaplanModule	29
kaplanUI	31
logistic.display2	32
logisticModule	32
logisticModule2	34
mklist	35
mksetdiff	36
optionUI	36
reclassificationJS	37
regress.display2	38
regressModule	39
regressModule2	40
regressModuleUI	42
rocModule	43
rocUI	44
ROC_table	45
survIDINRI_helper	46
tb1module	47
tb1module2	49
tb1moduleUI	50

tblsimple . . . . .	51
tblsimple2 . . . . .	54
tblsimpleUI . . . . .	56
timeROChelper . . . . .	59
timerocModule . . . . .	60
timerocUI . . . . .	61
timeROC_table . . . . .	62

**Index** **64**

coxModule *coxModule: shiny modulde server for Cox's model.*

**Description**

Shiny modulde 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)
```

**Arguments**

- input           input
- output          output
- session         session
- data            reactive data
- data\_label      reactuve 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

**Details**

Shiny modulde server for Cox's model.

**Value**

Shiny modulde 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	<i>csvFile: Shiny module Server for file upload.</i>
---------	--

---

**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(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  
  })  
}
```

---

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
    })
  }

```

---

FileSurvey

*FileSurvey: File upload server module for survey data analysis.*


---

### 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

*FileSurveyInput: File upload UI for survey data analysis.*


---

### 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

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


---

### Description

Shiny module 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

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

**Value**

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

**Examples**

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

server <- function(input, output, session) {

  data <- reactive(mtcars)
  data.label <- reactive(jstable::mk.lev(mtcars))
  id.gee <- reactive("mpg")

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

  output$logistictable <- renderDT({
    hide = which(colnames(out_logistic()$table) == "sig")
    datatable(out_logistic()$table, rownames=T, extension= "Buttons",
      caption = out_logistic()$caption,
      options = c(opt.tbreg(out_logistic()$caption),
        list(columnDefs = list(list(visible=FALSE, targets =hide))
      ),
    ),
```



```

        list(scrollX = TRUE)
      )
    ) %>% formatStyle("sig", target = 'row', backgroundColor = styleEqual("**", 'yellow'))
  })
}

```

---

 GEEModuleUI

*GEEModuleUI: shiny 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)
```

## Arguments

input	input
output	output
session	session
data	data
data_label	data label
data_varStruct	List of variable structure, Default: NULL

## 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)
```

**Arguments**

input	input
output	output
session	session
data	Reactive data

data\_label      Reactive data label  
 data\_varStruct   List of variable structure, Default: NULL

### 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

*ggpairsModuleUII: 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())
  })
}
```

---

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()
}
```

---

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**

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()  
}
```

---

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)
```

## Arguments

data	data
------	------

## 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()
}
```

---

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)  
}
```

---

jsSurveydAddin

*jsSurveydAddin: Rstudio addin of jsSurveyGadget*

---

**Description**

Rstudio addin of jsSurveyGadget

**Usage**

```
jsSurveydAddin()
```

**Details**

Rstudio addin of jsSurveyGadget

**Value**

Rstudio addin of jsSurveyGadget

**See Also**

[rstudio-editors](#)

**Examples**

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

---

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	<i>kaplanUI: shiny module UI for kaplan-meier plot</i>
----------	--

---

**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())
  })
}
```

---

`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

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

---

`logisticModule`      *logisticModule: Shiny module server for logistic regression.*

---

### Description

Shiny module server for logistic regression.

### Usage

```
logisticModule(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	data
data_label	data label
data_varStruct	List of variable structure, Default: NULL
nfactor.limit	nlevels limit in factor variable, Default: 10
design.survey	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 <- mtcars
  data.label <- jstable::mk.lev(mtcars)

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

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

---

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

---

**Description**

Function to make variable list excluding specific variables.

**Usage**

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

**Arguments**

varlist	Original variable list
vars	variable to exclude.

**Details**

Internal function

**Value**

variable list excluding specific variables.

**Examples**

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

---

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

---

**Description**

Option UI with icon

**Usage**

```
optionUI(id)
```

**Arguments**

id	id
----	----

**Details**

Option UI with icon

**Value**

Option UI with icon

**See Also**

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

**Examples**

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

server <- function(input, output, session) {

  data <- reactive(mtcars)
  data.label <- reactive(jstable::mk.lev(mtcars))

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

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

---

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)
```

---

regressModule	<i>regressModule: Shiny module server for linear regression.</i>
---------------	--

---

**Description**

Shiny module server for linear regression.

**Usage**

```
regressModule(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	data
data_label	data label
data_varStruct	List of variable structure, Default: NULL
nfactor.limit	nlevels limit in factor variable, Default: 10
design.survey	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 <- mtcars
  data.label <- jstable::mk.lev(mtcars)

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

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

---

regressModule2

*regressModule2: Shiny module server for linear regression for reactive data.*

---

**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	<i>regressModuleUI: shiny module UI for linear regression.</i>
-----------------	--

---

**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	<i>rocModule: shiny module server for roc analysis</i>
-----------	--

---

**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](#) [geeglm](#) [svyglm](#) [ggroc.roc](#) [theme\\_modern](#) [emf](#) [dev](#)

**Examples**

```
library(shiny);library(DT);library(data.table);library(jstable);library(ggplot2);library(pROC)  
ui <- fluidPage(  
  sidebarLayout(  
    sidebarPanel(  
      rocUI("roc")  
    ),  
    mainPanel(  

```

```

    plotOutput("plot_roc"),
    ggplotdownUI("roc"),
    DTOutput("table_roc")
  )
)
)

server <- function(input, output, session) {

  data <- reactive(mtcars)
  data.label <- jstable::mk.lev(mtcars)

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

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

  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"),
      ggplotdownUI("roc"),
      DTOutput("table_roc")
    )
  )
)

server <- function(input, output, session) {

  data <- reactive(mtcars)
  data.label <- jstable::mk.lev(mtcars)

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

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

  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-package](#)

**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)
```

---

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

---

**Description**

Helper function for IDI.INF.OUT in survIDINRI packages

**Usage**

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

**Arguments**

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

**Details**

Helper function for IDI.INF.OUT in survIDINRI packages

**Value**

IDI, NRI

**See Also**

[data.table](#)-package `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)
```

**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

**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

*tb1module: 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)
```

**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: F

**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](#) [svyCreateTableOne](#)

**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)
})
}

```

---

 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](#) [svyCreateTableOne](#)

**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)
})
}

```

---

 tb1simpleUI

*tb1simpleUI : tb1 module UI for propensity score analysis*


---

### Description

Table 1 module UI for propensity score analysis.

### Usage

```
tb1simpleUI(id)
```

### Arguments

id                    id



**Details**

tb1 module UI for propensity score analysis

**Value**

Table 1 UI for propensity score analysis

**Examples**

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

server <- function(input, output, session) {

  mat.info <- callModule(FilePs, "datafile")

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

  vlist <- eventReactive(mat.info(), {
    mklist <- function(varlist, vars){
      lapply(varlist,
        function(x){
          inter <- intersect(x, vars)
          if (length(inter) == 1){
            inter <- c(inter, "")
          }
          return(inter)
        }
      )
    }
  })
  factor_vars <- names(data())[data()[, lapply(.SD, class) %in% c("factor", "character")]]
  factor_list <- mklist(data_varStruct(), factor_vars)
  conti_vars <- setdiff(names(data()), c(factor_vars, "pscore", "iptw"))
  conti_list <- mklist(data_varStruct(), conti_vars)
  nclass_factor <- unlist(data()[, lapply(.SD, function(x){length(unique(x)[!is.na(unique(x))])})],
    .SDcols = factor_vars]
  class01_factor <- unlist(data()[, lapply(.SD, function(x){identical(levels(x), c("0", "1"))})],
```

```

        .SDcols = factor_vars])
  validate(
    need(!is.null(class01_factor), "No categorical variables coded as 0, 1 in data")
  )
  factor_01vars <- factor_vars[class01_factor]
  factor_01_list <- mklist(data_varStruct(), factor_01vars)
  group_vars <- factor_vars[nclass_factor >=2 & nclass_factor <=10 & nclass_factor < nrow(data())]
  group_list <- mklist(data_varStruct(), group_vars)
  except_vars <- factor_vars[nclass_factor>10 | nclass_factor==1 | nclass_factor==nrow(data())]

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

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

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

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

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

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

```

---

timeROChelper            *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

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

### Details

Helper function for timerocModule

### Value

timeROC 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

**Usage**

```
timerocModule(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 time-dependent roc analysis

**Value**

shiny module server for time-dependent roc analysis

**See Also**

[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)))
  })
}

```

---

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

*timeROC\_table: extract AUC information from list of timeROC object.*


---

**Description**

extract AUC information from list of timeROC object.

**Usage**

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



# Index

ci.auc, [46](#)  
confint, [63](#)  
cox2.display, [26](#)  
coxModule, [3](#)  
coxph, [26](#), [47](#), [59](#)  
coxUI, [4](#)  
CreateTableOneJS, [52](#), [54](#)  
csvFile, [5](#)  
csvFileInput, [6](#)

data.table, [26](#), [60](#)  
dev, [43](#)  
dropdownButton, [37](#)

emf, [43](#)

FilePs, [7](#)  
FilePsInput, [8](#)  
FileRepeated, [9](#)  
FileRepeatedInput, [11](#)  
FileSurvey, [12](#)  
FileSurveyInput, [13](#)

geeglm, [43](#)  
GEEModuleLinear, [14](#)  
GEEModuleLogistic, [15](#)  
GEEModuleUI, [17](#)  
ggpairsModule, [18](#)  
ggpairsModule2, [19](#)  
ggpairsModuleUI1, [20](#)  
ggpairsModuleUI2, [22](#)  
ggplotdownUI, [23](#)  
ggroc.roc, [43](#)  
ggsave, [26](#)

IDI.INF, [47](#)  
IDI.INF.OUT, [47](#)

jsBasicAddin, [24](#)  
jsBasicGadget, [24](#)  
jskm, [26](#)  
jsPropensityAddin, [25](#)  
jsPropensityGadget, [26](#)  
jsRepeatedAddin, [27](#)  
jsRepeatedGadget, [27](#)  
jsSurveyAddin, [28](#)  
jsSurveyGadget, [29](#)

kaplanModule, [29](#)  
kaplanUI, [31](#)

logistic.display2, [32](#)  
logisticModule, [32](#)  
logisticModule2, [34](#)

match.data, [26](#)  
matchit, [26](#)  
mklist, [35](#)  
mksetdiff, [36](#)  
model.matrix, [47](#)

optionUI, [36](#)

predict, [59](#)

quantile, [43](#), [60](#)

rbindlist, [60](#)  
rcorrp.cens, [38](#)  
reclassificationJS, [37](#)  
regress.display2, [38](#)  
regressModule, [39](#)  
regressModule2, [40](#)  
regressModuleUI, [42](#)  
roc.test, [46](#)  
ROC\_table, [45](#)  
rocModule, [43](#)  
rocUI, [44](#)

setkey, [43](#), [60](#)  
Surv, [26](#), [47](#)  
survfit, [26](#)



survIDINRI\_helper, 46  
svycox.display, 26  
svycoxph, 59  
svyCreateTableOne, 52, 54  
svydesign, 52, 54  
svyglm, 43  
svyjskm, 26  
svykm, 26

tb1module, 47  
tb1module2, 49  
tb1moduleUI, 50  
tb1simple, 51  
tb1simple2, 54  
tb1simpleUI, 56  
theme\_modern, 43  
timeROC, 59  
timeROC\_table, 62  
timeROChelper, 59  
timerocModule, 60  
timerocUI, 61  
tooltipOptions, 37

var\_label, 52