Package 'dashPivottable'

October 13, 2022

Title Interactive React-Based Pivot Tables for Dash

Version 0.0.2-1

Description Pivot tables are useful for interactive presentation of summary statistics computed for data contained in another table. The 'dashPivottable' package wraps 'react-pivottable', making it easy to add drag-and-drop tables into your Dash for R applications.

Depends R (>= 3.0.2)

Imports

Suggests dash, dashHtmlComponents, dashTable, jsonlite

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URL https://github.com/plotly/dash-pivottable

BugReports https://github.com/plotly/dash-pivottable/issues

Encoding UTF-8

LazyData true

KeepSource true

NeedsCompilation no

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Repository CRAN

Date/Publication 2020-08-12 09:30:02 UTC

R topics documented:

`dashPivottable-package` *Interactive React-Based Pivot Tables for Dash*

Description

Pivot tables are useful for interactive presentation of summary statistics computed for data contained in another table. The 'dashPivottable' package wraps 'react-pivottable', making it easy to add drag-and-drop tables into your 'dash' applications.

Author(s)

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`dashPivotTable` *PivotTable component*

Description

Pivot tables are useful for interactive presentation of summary statistics computed for data contained in another table. This function provides a convenient Dash interface to the 'react-pivottable' component, which makes it easy to embed pivot tables into Dash for R applications. Within React, the interactive component provided by 'react-pivottable' is 'PivotTableUI', but output rendering is delegated to the non-interactive 'PivotTable' component, which accepts a subset of its properties. 'PivotTable' in turn delegates to a specific renderer component, such as the default 'TableRenderer', which accepts a subset of the same properties. Finally, most renderers will create non-React PivotData objects to handle the actual computations, which also accept a subset of the same properties as the rest of the stack. The arguments for this function correspond to properties of the component; a full list is provided below. 'react-pivottable' was developed by Nicolas Kruchten; source for this component is available from https://github.com/plotly/react-pivottable.

Usage

```
dashPivotTable(id=NULL, data=NULL, hiddenAttributes=NULL,
hiddenFromAggregators=NULL, hiddenFromDragDrop=NULL,
menuLimit=NULL, unusedOrientationCutoff=NULL, cols=NULL,
colOrder=NULL, rows=NULL, rowOrder=NULL,
aggregatorName=NULL, vals=NULL, valueFilter=NULL,
rendererName=NULL)
```

Arguments

id	Character. The ID used to identify this component in Dash callbacks
data	Unnamed list. Data to be summarized
hiddenAttributes	Unnamed list. Specifies attribute names to omit from the UI
hiddenFromAggregators	Unnamed list. Specifies attribute names to omit from the aggregator arguments dropdowns
hiddenFromDragDrop	Unnamed list. Specifies attribute names to omit from the drag and drop portion of the UI
menuLimit	Numeric. Maximum number of values to list in the double-click menu
unusedOrientationCutoff	Numeric. If the attributes' names' combined length in characters exceeds this value then the unused attributes area will be shown vertically to the left of the UI instead of horizontally above it. 0 therefore means 'always vertical', and infinity means 'always horizontal'.
cols	Unnamed list. Specifies which columns are currently in the column area
colOrder	Character. The order in which column data is provided to the renderer, must be one of "key_a_to_z", "value_a_to_z", "value_z_to_a", ordering by value orders by column total
rows	Unnamed list. Specifies which rows are currently inside the row area.
rowOrder	Character. The order in which row data is provided to the renderer, must be one of "key_a_to_z", "value_a_to_z", "value_z_to_a", ordering by value orders by row total
aggregatorName	Character. Specifies which aggregator is currently selected. e.g. Count, Sum, Average, etc.
vals	Unnamed list. Values to use for the aggregator.
valueFilter	Named list. Value filter for each attibute name.
rendererName	Character. Specifies which renderer is currently selected. e.g. Table, Line Chart, Scatter Chart, etc.

Value

named list of JSON elements corresponding to React.js properties and their values

Examples

```
# Input data for dashPivottable may be passed in the "list-of-lists"
# format -- scroll down to see an example which demonstrates how
# to pass a data.frame into dashPivottable directly.
if (interactive() && require(dash)) {
  library(dash)
  library(dashPivottable)
  library(dashHtmlComponents)
```

```
app <- Dash$new()
app$title("Summary statistics for tips data")

app$layout(
  htmlDiv(
    list(
      dashPivotTable(
        id = "table",
        data = tips,
        cols = list("Day of Week"),
        colOrder = "key_a_to_z",
        rows = list("Party Size"),
        rowOrder = "key_a_to_z",
        rendererName = "Grouped Column Chart",
        aggregatorName = "Average",
        vals = list("Total Bill"),
        valueFilter = list("Day of Week"=list("Thursday"=FALSE))
      ),
      htmlDiv(
        id = "output"
      )
    )
  )
)

app$callback(output = output(id="output", property="children"),
             params = list(input(id="table", property="cols"),
                           input(id="table", property="rows"),
                           input(id="table", property="rowOrder"),
                           input(id="table", property="colOrder"),
                           input(id="table", property="aggregatorName"),
                           input(id="table", property="rendererName")),
             function(cols, rows, row_order, col_order, aggregator, renderer) {
               return(
                 list(
                   htmlP(cols, id="columns"),
                   htmlP(rows, id="rows"),
                   htmlP(row_order, id="row_order"),
                   htmlP(col_order, id="col_order"),
                   htmlP(aggregator, id="aggregator"),
                   htmlP(renderer, id="renderer")
                 )
               )
             }
)

app$run_server(debug=TRUE)

# This example illustrates the use of `df_to_list` to format a data.frame
# for use with dashPivottable
library(dashTable)
```

```
app <- Dash$new()
app$title("Summary statistics for iris data")

app$layout(
  htmlDiv(
    list(
      dashPivotTable(
        id = "table",
        data = df_to_list(Loblolly),
        cols = list("Seed"),
        colOrder = "key_a_to_z",
        rows = list("age"),
        rowOrder = "key_a_to_z",
        rendererName = "Grouped Column Chart",
        aggregatorName = "Average",
        vals = list("height")
      ),
      htmlDiv(
        id = "output"
      )
    )
  )
)

app$callback(output = output(id="output", property="children"),
             params = list(input(id="table", property="cols"),
                           input(id="table", property="rows"),
                           input(id="table", property="rowOrder"),
                           input(id="table", property="colOrder"),
                           input(id="table", property="aggregatorName"),
                           input(id="table", property="rendererName")),
             function(cols, rows, row_order, col_order, aggregator, renderer) {
               return(
                 list(
                   htmlP(cols, id="columns"),
                   htmlP(rows, id="rows"),
                   htmlP(row_order, id="row_order"),
                   htmlP(col_order, id="col_order"),
                   htmlP(aggregator, id="aggregator"),
                   htmlP(renderer, id="renderer")
                 )
               )
             }
)

app$run_server(debug=TRUE)
}
```

---

tips *Tips received by a single server over a two month period*

Description

In 1990, a server recorded data on all tips received during a two and a half month period working in a single restaurant. The restaurant was part of a national chain and was located in a suburban shopping center.

Usage

```
tips
```

Format

A data frame with 244 rows and 7 variables:

total_bill total bill (cost of the meal), including tax, in US dollars

tip amount of gratuity received, in US dollars

sex sex of person paying (0 = male, 1 = female)

smoker was at least one member of the party a smoker? (0 = no, 1 = yes)

day 3 = Thursday, 4 = Friday, 5 = Saturday, 6 = Sunday

time 0 = day, 1 = night

size party size

Source

Bryant, P. G. and Smith, M. A. (1995), Practical Data Analysis: Case Studies in Business Statistics, Richard D. Irwin Publishing, Homewood, IL.

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