

Package ‘Certara.VPCResults’

December 2, 2024

Title Generate Visual Predictive Checks (VPC) Using 'shiny'

Version 3.0.2

Description Utilize the 'shiny' interface to parameterize a Visual Predictive Check (VPC), including selecting from different binning or binless methods and performing stratification, censoring, and prediction correction. Generate the underlying 'tidyvpc' and 'ggplot2' code directly from the user interface and download R or Rmd scripts to reproduce the VPCs in R.

Depends R (>= 4.0)

License LGPL-3

URL <https://certara.github.io/R-VPCResults/>

Encoding UTF-8

RoxygenNote 7.3.2

Suggests knitr, rmarkdown, xpose, ggnewscale, testthat (>= 3.0.0)

Imports shinyAce, shinymeta, bslib (>= 0.7.0), colourpicker, data.table, dplyr, DT, grDevices, ggplot2, plotly, shiny (>= 1.7.0), shinycssloaders, shinyjs, shinyWidgets, shinyjqui, sortable, tidyvpc, htmltools, rlang, scales

Config/testthat/edition 3

NeedsCompilation no

Author James Craig [aut, cre],
Mike Talley [aut],
Certara USA, Inc [cph, fnd]

Maintainer James Craig <james.craig@certara.com>

Repository CRAN

Date/Publication 2024-12-02 15:30:02 UTC

Contents

| | |
|-------------------------|---|
| theme_certara | 2 |
| vpcResultsUI | 2 |
| write_code | 3 |

| | |
|--------------|----------|
| Index | 5 |
|--------------|----------|

| | |
|---------------|-------------------------------------|
| theme_certara | <i>A ggplot2 theme for Certara.</i> |
|---------------|-------------------------------------|

Description

A ggplot2 theme for Certara.

Usage

```
theme_certara(  
  base_size = 11,  
  base_family = "",  
  base_line_size = base_size/22,  
  base_rect_size = base_size/22,  
  grid = c("none", "horizontal", "both")  
)
```

Arguments

| | |
|----------------|--|
| base_size | base font size, given in pts. |
| base_family | base font family |
| base_line_size | base size for line elements |
| base_rect_size | base size for rect elements |
| grid | Which grid lines should appear? Horizontal only, both horizontal and vertical, or none (default). continuous_scale() . |

Details

There are 3 variants of the theme: no grid `theme_certara()`, full grid `theme_certara(grid="both")`, and horizontal grid lines only `theme_certara(grid="horizontal")`.

Value

An object of class `theme()`.

| | |
|--------------|--|
| vpcResultsUI | <i>Shiny GUI to parameterize Visual Predictive Check (VPC)</i> |
|--------------|--|

Description

Use `tidyvpc` package to parameterize VPC from Shiny GUI and customize plot using `ggplot2`. Code generation functionality allows you to reproduce `tidyvpc` object and `ggplot2` plot in your local R session via R script saved to your working directory.

Usage

```

vpcResultsUI(
  observed,
  simulated,
  ObsName = NULL,
  vpc.type = c("continuous", "categorical"),
  tagged = NULL,
  settings = NULL,
  ...
)

```

Arguments

| | |
|-----------|--|
| observed | Observed input data. |
| simulated | Simulated input data. |
| ObsName | Optional character value specifying the name of the observed dependent variable (e.g., ObsName). |
| vpc.type | Character value specifying type of VPC. |
| tagged | A list of tagged VPC's or model diagnostics created from previous Certara.VPC or Certara.ModelResults session. |
| settings | A list of plot customization settings used in previous Certara.VPC or Certara.ModelResults session. |
| ... | Arguments for initiation from Pirana. |

Value

If `interactive()`, returns a list of tagged diagnostics from the Shiny application, otherwise returns `TRUE`.

Examples

```

if (interactive()) {
  vpcResultsUI(tidyvpc::obs_data, tidyvpc::sim_data)
}

```

write_code

Write code to R script from tagged diagnostics

Description

Use this function to write code to R script from diagnostics tagged in Certara's VPC Results Shiny Application.

Usage

```
write_code(tagged, file)
```

Arguments

| | |
|--------|---|
| tagged | List of tagged objects from returned from <code>VPCResultsUI()</code> . |
| file | Character specifying path of output file. If missing, it will be saved as <code>code.R</code> in working directory. |

Value

Returns NULL after writing to file.

Examples

```
if (interactive()) {  
  tagged_diagnostics <-  
    vpcResultsUI(tidyvpc::obs_data, tidyvpc::sim_data)  
  
  write_code(tagged_diagnostics, "tagged_vpc.R")  
}
```

Index

`continuous_scale`, 2

`theme`, 2

`theme_certara`, 2

`vpcResultsUI`, 2

`write_code`, 3