Package 'classifierplots'

October 12, 2022

Title Generates a Visualization of Classifier Performance as a Grid of Diagnostic Plots

Version 1.4.0

Description Generates a visualization of binary classifier performance as a grid of diagnostic plots with just one function call. Includes ROC curves, prediction density, accuracy, precision, recall and calibration plots, all using ggplot2 for easy modification.
Debug your binary classifiers faster and easier!

Depends R (>= 3.1), ggplot2 (>= 2.2), data.table (>= 1.10),

Imports Rcpp (>= 0.12), grid, ROCR, caret, gridExtra (>= 2.2), stats, utils, png,

Suggests testthat,

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Encoding UTF-8

BugReports https://github.com/adefazio/classifierplots/issues

URL https://github.com/adefazio/classifierplots

LazyData true

RoxygenNote 5.0.1

NeedsCompilation no

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Repository CRAN

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R topics documented:

`accuracy_plot` *accuracy_plot*

Description

Returns a ggplot2 plot object containing an accuracy @ percentile plot

Usage

```
accuracy_plot(test.y, pred.prob, granularity = 0.02, show_numbers = T)
```

Arguments

`test.y`	List of know labels on the test set
`pred.prob`	List of probability predictions on the test set
`granularity`	Default 0.02, probability step between points in plot.
`show_numbers`	Show values as numbers above the plot line

`calculate_auc` *calculate_auc*

Description

Compute auc from predictions and truth

Usage

```
calculate_auc(test.y, pred.prob)
```

Arguments

test.y	List of know labels on the test set
pred.prob	List of probability predictions on the test set

Value

auc

`calibration_plot` *calibration_plot*

Description

Returns a ggplot2 plot object containing a smoothed propensity @ prediction level plot

Usage

```
calibration_plot(test.y, pred.prob)
```

Arguments

test.y	List of know labels on the test set
pred.prob	List of probability predictions on the test set

`classifierplots` *The main functions you want are* `classifierplots` *or* `classifierplots_folder`.

Description

The main functions you want are `classifierplots` or `classifierplots_folder`.

Produce a suit of classifier diagnostic plots

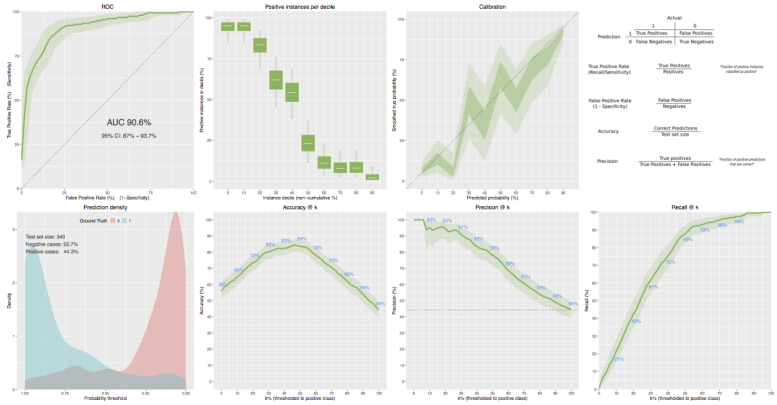
Usage

```
classifierplots(test.y, pred.prob)
```

Arguments

test.y	List of know labels on the test set
pred.prob	List of probability predictions on the test set

Details



Examples

```
## Not run:
 classifierplots(example_predictions$test.y, example_predictions$pred.prob)

## End(Not run)
```

`classifierplots_folder` *classifierplots_folder*

Description

Produce a suit of classifier diagnostic plots, saving to disk.

Usage

```
classifierplots_folder(test.y, pred.prob, folder, height = 5, width = 5)
```

Arguments

`test.y`	List of know labels on the test set
`pred.prob`	List of probability predictions on the test set
`folder`	Directory to save plots into
`height`	height of separately saved plots
`width`	width of separately saved plots

`density_plot` *density_plot*

Description

Returns a ggplot2 plot object containing a score density plot.

Usage

```
density_plot(test.y, pred.prob)
```

Arguments

`test.y`	List of know labels on the test set
`pred.prob`	List of probability predictions on the test set

`example_predictions` *Generated using the gen_example included in the github source*

Description

Generated using the gen_example included in the github source

`lift_plot` *lift_plot*

Description

Returns a ggplot2 plot object containing an precision @ percentile plot

Usage

```
lift_plot(test.y, pred.prob, granularity = 0.02, show_numbers = T)
```

Arguments

`test.y`	List of know labels on the test set
`pred.prob`	List of probability predictions on the test set
`granularity`	Default 0.02, probability step between points in plot.
`show_numbers`	Show numbers at deciles T/F default T.

notation_key_plot *notation_key_plot*

Description

Produces some definitions as a grid.

Usage

```
notation_key_plot()
```

positives_plot *positives_plot*

Description

Returns a ggplot2 plot object containing an positives-per-decile plot.

Usage

```
positives_plot(test.y, pred.prob)
```

Arguments

test.y	List of know labels on the test set
pred.prob	List of probability predictions on the test set

precision_plot *precision_plot*

Description

Returns a ggplot2 plot object containing an precision @ percentile plot

Usage

```
precision_plot(test.y, pred.prob, granularity = 0.02, show_numbers = T)
```

Arguments

test.y	List of know labels on the test set
pred.prob	List of probability predictions on the test set
granularity	Default 0.02, probability step between points in plot.
show_numbers	Show numbers at deciles T/F default T.

propensity_plot *propensity_plot*

Description

Returns a ggplot2 plot object containing an propensity @ percentile plot

Usage

```
propensity_plot(test.y, pred.prob, granularity = 0.02)
```

Arguments

test.y	List of know labels on the test set
pred.prob	List of probability predictions on the test set
granularity	Default 0.02, probability step between points in plot.

recall_plot *recall_plot*

Description

Returns a ggplot2 plot object containing an sensitivity @ percentile plot

Usage

```
recall_plot(test.y, pred.prob, granularity = 0.02, show_numbers = T)
```

Arguments

test.y	List of know labels on the test set
pred.prob	List of probability predictions on the test set
granularity	Default 0.02, probability step between points in plot.
show_numbers	Show numbers at deciles T/F default T.

`roc_plot` *roc_plot*

Description

Produces a smoothed ROC curve as a ggplot2 plot object. A confidence interval is produced using bootstrapping, although it is turned off by default if you have a large dataset.

Usage

```
roc_plot(test.y, pred.prob, resamps = 2000, force_bootstrap = NULL)
```

Arguments

`test.y`	List of know labels on the test set
`pred.prob`	List of probability predictions on the test set
`resamps`	How many bootstrap samples to use
`force_bootstrap`	True/False to force or force off bootstrapping.

`sigmoid` *sigmoid*

Description

Logistic sigmoid function, that maps any real number to the [0,1] interval. Supports vectors of numeric.

Usage

```
sigmoid(x)
```

Arguments

`x`	data

Index