

Package: classifierplots (via r-universe)

August 27, 2024

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 Repp (>= 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

Repository <https://adefazio.r-universe.dev>

RemoteUrl <https://github.com/adefazio/classifierplots>

RemoteRef HEAD

RemoteSha 6d2484899ccff159049b1345a1dcb2f01264c64d

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| | |
|---------------|----------------------|
| accuracy_plot | <i>accuracy_plot</i> |
|---------------|----------------------|

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 | <i>calculate_auc</i> |
|---------------|----------------------|

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 | <i>calibration_plot</i> |
|------------------|-------------------------|

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 | <i>The main functions you want are classifierplots or classifierplots_folder.</i> |
|-----------------|-------------------------------------------------------------------------------------------------------------------|

Description

The main functions you want are [classifierplots](#) or [classifierplots_folder](#).

Produce a suit of classifier diagnostic plots

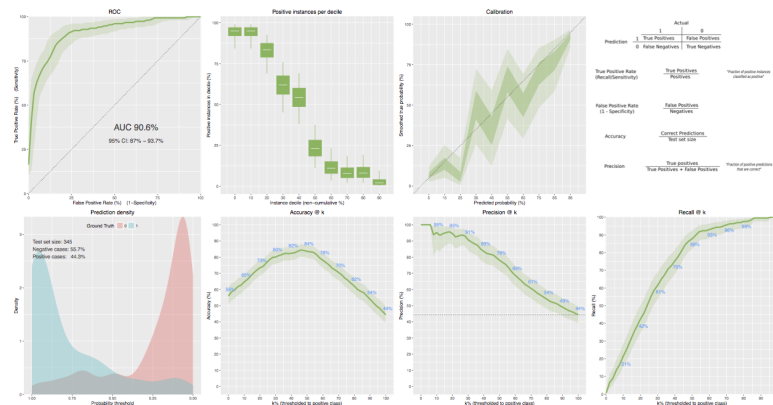
Usage

```
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 known 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 | <i>density_plot</i> |
|--------------|---------------------|

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 | <i>Generated using the gen_example included in the github source</i> |
|---------------------|----------------------------------------------------------------------|

Description

Generated using the gen_example included in the github source

| | |
|-----------|------------------|
| lift_plot | <i>lift_plot</i> |
|-----------|------------------|

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

| | |
|--------------------------|--------------------------------------------------------|
| <code>test.y</code> | List of know labels on the test set |
| <code>pred.prob</code> | List of probability predictions on the test set |
| <code>granularity</code> | 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

| | |
|---------------------------|--------------------------------------------------------|
| <code>test.y</code> | List of know labels on the test set |
| <code>pred.prob</code> | List of probability predictions on the test set |
| <code>granularity</code> | Default 0.02, probability step between points in plot. |
| <code>show_numbers</code> | 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 |
|---|------|

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