

# Package ‘classifierplots’

January 25, 2017

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

**Version** 1.3.2

**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,

**License** BSD 3-clause License + file LICENSE

**Encoding** UTF-8

**BugReports** <https://github.com/ambiata/classifierplots/issues>

**URL** <https://github.com/ambiata/classifierplots>

**LazyData** true

**RoxygenNote** 5.0.1

**NeedsCompilation** no

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**Repository** CRAN

**Date/Publication** 2017-01-25 09:02:44

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accuracy_plot	<i>accuracy_plot</i>
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### 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

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calculate_auc	<i>calculate_auc</i>
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### 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

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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

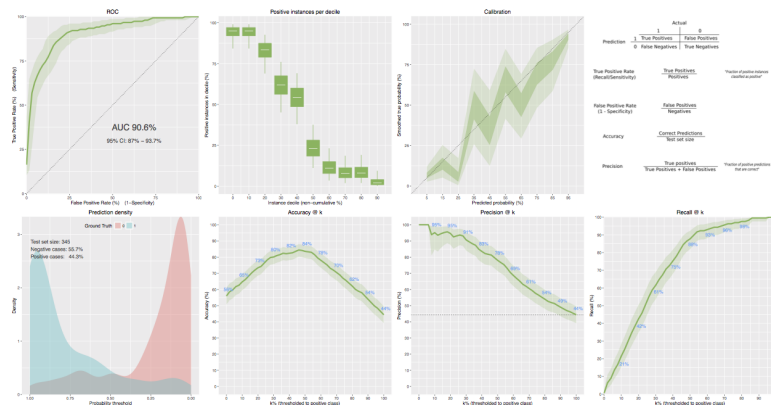
**Usage**

```
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

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density_plot	<i>density_plot</i>
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**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

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example_predictions	<i>Generated using the gen_example included in the github source</i>
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**Description**

Generated using the gen\_example included in the github source

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lift_plot	<i>lift_plot</i>
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**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.

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notation\_key\_plot      *notation\_key\_plot*

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### 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.

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`recall_plot`      *recall\_plot*

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**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*

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**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.

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sigmoid                      *sigmoid*

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**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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