Package 'AutoPlots'

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Title AutoPlots
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Maintainer Adrian Antico <adrianantico@gmail.com></adrianantico@gmail.com>
Description R package for generating plots in a simple way
<pre>URL https://github.com/AdrianAntico/AutoPlots</pre>
<pre>BugReports https://github.com/AdrianAntico/AutoPlots/issues</pre>
Depends R (>= $4.0.0$)
Imports bit64, data.table, lubridate, ggplot2, plotly, echarts4r
Suggests knitr, rmarkdown
VignetteBuilder knitr
Contact Adrian Antico
Encoding UTF-8
Language en-US
LazyData true
NeedsCompilation no
RoxygenNote 7.2.1
Author Adrian Antico [aut, cre]
R topics documented:
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Install
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BuildBinary

BuildBinary

Description

Build package binary

Usage

BuildBinary(Root = NULL)

Arguments

Root

NULL will setwd to project root as defined in function

Author(s)

Adrian Antico

See Also

Other Utilities: Install(), UpdateDocs()

FakeDataGenerator 3

FakeDataGenerator FakeDataGenerator

Description

Create fake data for examples

Usage

```
FakeDataGenerator(
   Correlation = 0.7,
   N = 1000L,
   ID = 5L,
   FactorCount = 2L,
   AddDate = TRUE,
   AddComment = FALSE,
   AddWeightsColumn = FALSE,
   ZIP = 5L,
   TimeSeries = FALSE,
   TimeSeriesTimeAgg = "day",
   ChainLadderData = FALSE,
   Classification = FALSE,
   MultiClass = FALSE
)
```

Arguments

Correlation Set the correlation value for simulated data

N Number of records

ID Number of IDcols to include

FactorCount Number of factor type columns to create

AddDate Set to TRUE to include a date column

AddComment Set to TRUE to add a comment column

ZIP Zero Inflation Model target variable creation. Select from 0 to 5 to create that

number of distinctly distributed data, stratifed from small to large

TimeSeries For testing AutoBanditSarima

TimeSeriesTimeAgg

Choose from "1min", "5min", "10min", "15min", "30min", "hour", "day", "week", "month", "quarter", "year",

ChainLadderData

Set to TRUE to return Chain Ladder Data for using AutoMLChainLadderTrainer

Classification Set to TRUE to build classification data
MultiClass Set to TRUE to build MultiClass data

Author(s)

Adrian Antico

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Install

Install

Description

To install the package

Usage

```
Install(Root = NULL)
```

Arguments

Root

NULL will setwd to project root as defined in function

Author(s)

Adrian Antico

See Also

Other Utilities: BuildBinary(), UpdateDocs()

Plot.Area

Plot.Area

Description

This function automatically builds calibration plots and calibration boxplots for model evaluation using regression, quantile regression, and binary and multinomial classification

```
Plot.Area(
  dt = NULL,
  AggMethod = "mean",
  PreAgg = TRUE,
  Engine = "Echarts",
  XVar = NULL,
  YVar = NULL,
  GroupVar = NULL,
  YVarTrans = "Identity",
  XVarTrans = "Identity",
  FacetRows = 1,
  FacetCols = 1,
  FacetLevels = NULL,
  Height = NULL,
  Width = NULL,
  Title = "Line Plot",
  ShowLabels = FALSE,
```

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```
Title.YAxis = NULL,
 Title.XAxis = NULL,
 EchartsTheme = "macarons",
 X_Scroll = FALSE,
 Y_Scroll = FALSE,
 TimeLine = TRUE,
 Alpha = 0.5,
  Smooth = TRUE,
  ShowSymbol = FALSE,
 BackGroundColor = "#6a6969",
 ChartColor = "#001534",
 FillColor = "#0066ff",
 FillColorReverse = "#97ff00",
 GridColor = "white",
 TextColor = "white",
  ZeroLineColor = "#ffff",
  ZeroLineWidth = 1.25,
  title.fontSize = 22,
  title.fontWeight = "bold",
  title.textShadowColor = "#63aeff",
  title.textShadowBlur = 3,
  title.textShadowOffsetY = 1,
  title.textShadowOffsetX = -1,
  xaxis.fontSize = 14,
 yaxis.fontSize = 14,
 Debug = FALSE
)
```

Arguments

dt source data.table

AggMethod character PreAgg logical

Engine "Echarts" or "Plotly"

XVar X-Axis variable name

YVar Y-Axis variable name

GroupVar One Grouping Variable

YVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

XVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

FacetRows Defaults to 1 which causes no faceting to occur vertically. Otherwise, supply a

numeric value for the number of output grid rows

FacetCols Defaults to 1 which causes no faceting to occur horizontally. Otherwise, supply

a numeric value for the number of output grid columns

FacetLevels Faceting rows x columns is the max number of levels allowed in a grid. If your

GroupVar has more you can supply the levels to display.

 $\label{eq:height} \begin{array}{ll} \mbox{Height} & = \mbox{NULL}, \\ \mbox{Width} & = \mbox{NULL}, \end{array}$

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Title "Title"

ShowLabels character

Title.YAxis character

Title.XAxis character

EchartsTheme Provide an "Echarts" theme

X_Scroll logicalY_Scroll logicalTimeLine Logical

Alpha 0 to 1 for setting transparency

Smooth = TRUE ShowSymbol = FALSE

BackGroundColor

color outside of plot window. Rcolors and hex

ChartColor color FillColor color FillColorReverse

character

GridColor color

TextColor "Not Implemented"

ZeroLineColor color ZeroLineWidth 1

Debugging purposes

Area logical

Author(s)

Adrian Antico

See Also

Other Standard Plots: Plot.BarPlot3D(), Plot.Bar(), Plot.Box(), Plot.Copula3D(), Plot.Copula(), Plot.CorrMatrix(), Plot.Density(), Plot.HeatMap(), Plot.Histogram(), Plot.Line(), Plot.Pie(), Plot.River(), Plot.Scatter3D(), Plot.Scatter(), Plot.StackedBar(), Plot.Step(), Plot.Violin()

Plot.Bar Plot.Bar

Description

Build a bar plot by simply passing arguments to a single function

Plot.Bar 7

Usage

```
Plot.Bar(
  dt = NULL,
  PreAgg = FALSE,
  XVar = NULL,
  YVar = NULL,
  GroupVar = NULL,
  YVarTrans = "Identity",
  XVarTrans = "Identity",
  FacetRows = 1,
  FacetCols = 1,
  FacetLevels = NULL,
  AggMethod = "mean",
  Height = NULL,
  Width = NULL,
  Title = "Bar Plot",
  ShowLabels = FALSE,
  Title.YAxis = NULL,
  Title.XAxis = NULL,
  Engine = "Echarts",
  EchartsTheme = "macarons",
  TimeLine = TRUE,
  X_Scroll = TRUE,
  Y_Scroll = TRUE,
  BackGroundColor = "#6a6969",
  ChartColor = "#001534",
  FillColor = "#0066ff",
  FillColorReverse = "#97ff00",
  GridColor = "white",
  TextColor = "white",
  ZeroLineColor = "#ffff",
  ZeroLineWidth = 1.25,
  title.fontSize = 22,
  title.fontWeight = "bold",
  title.textShadowColor = "#63aeff",
  title.textShadowBlur = 3,
  title.textShadowOffsetY = 1,
  title.textShadowOffsetX = -1,
  xaxis.fontSize = 14,
  yaxis.fontSize = 14,
  Debug = FALSE
```

Arguments

dt source data.table

PreAgg logical

XVar X-Axis variable name
YVar Y-Axis variable name

GroupVar Column name of Group Variable for distinct colored histograms by group levels

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YVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

XVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

FacetRows Defaults to 1 which causes no faceting to occur vertically. Otherwise, supply a

numeric value for the number of output grid rows

FacetCols Defaults to 1 which causes no faceting to occur horizontally. Otherwise, supply

a numeric value for the number of output grid columns

FacetLevels Faceting rows x columns is the max number of levels allowed in a grid. If your

GroupVar has more you can supply the levels to display.

AggMethod Choose from 'mean', 'sum', 'sd', and 'median'

 $\begin{tabular}{ll} \begin{tabular}{ll} Height & = NULL, \\ Width & = NULL, \\ Title & title \\ ShowLabels & logical \\ \end{tabular}$

Title.YAxis NULL. If NULL, YVar name will be used Title.XAxis NULL. If NULL, XVar name will be used

Engine 'Plotly' or "Echarts"

EchartsTheme "auritus", "azul", "bee-inspired", "blue", "caravan", "carp", "chalk", "cool", "dark-bold", "dark", "eduardo"

#' "essos", "forest", "fresh-cut", "fruit", "gray", "green", "halloween", "helianthus", "infographic", "inspire

#' "jazz", "london", "dark", "macarons", "macarons2", "mint", "purple-passion", "red-

velvet", "red", "roma", "royal", #' "sakura", "shine", "tech-blue", "vintage", "walden", "wef", "weforum", "

TimeLine logical X_Scroll logical Y_Scroll logical

 ${\tt BackGroundColor}$

color outside of plot window. Rcolors and hex outside of plot window. Rcolors

and hex character

ChartColor 'lightsteelblue'

FillColor 'gray'
FillColorReverse

character

GridColor 'white'
TextColor 'darkblue'
ZeroLineColor = '#ffff'

Debugging purposes

Author(s)

Adrian Antico

See Also

```
Other Standard Plots: Plot.Area(), Plot.BarPlot3D(), Plot.Box(), Plot.Copula3D(), Plot.Copula(), Plot.CorrMatrix(), Plot.Density(), Plot.HeatMap(), Plot.Histogram(), Plot.Line(), Plot.Pie(), Plot.River(), Plot.Scatter3D(), Plot.Scatter(), Plot.StackedBar(), Plot.Step(), Plot.Violin()
```

Plot.BarPlot3D

Plot.BarPlot3D

Plot.BarPlot3D

Description

Build a 3D Bar Plot

```
Plot.BarPlot3D(
  dt,
  PreAgg = FALSE,
  AggMethod = "mean",
  XVar = NULL,
  YVar = NULL,
  ZVar = NULL,
  YVarTrans = "Identity",
  XVarTrans = "Identity",
  ZVarTrans = "Identity",
  FacetRows = 1,
  FacetCols = 1,
  FacetLevels = NULL,
  NumberBins = 21,
  NumLevels_Y = 33,
  NumLevels_X = 33,
  Height = NULL,
  Width = NULL,
  Title = "3D Bar Plot",
  ShowLabels = FALSE,
  Title.YAxis = NULL,
  Title.XAxis = NULL,
  Engine = "Plotly",
  EchartsTheme = "dark",
  X_Scroll = TRUE,
  Y_Scroll = TRUE,
  BackGroundColor = "#6a6969",
  ChartColor = "#001534",
  FillColor = "#0066ff",
  FillColorReverse = "#97ff00",
  GridColor = "white",
  TextColor = "white",
  title.fontSize = 22,
  title.fontWeight = "bold",
  title.textShadowColor = "#63aeff",
  title.textShadowBlur = 3,
  title.textShadowOffsetY = 1,
  title.textShadowOffsetX = -1,
  yaxis.fontSize = 14,
  xaxis.fontSize = 14,
  zaxis.fontSize = 14,
  Debug = FALSE
```

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)

Arguments

dt source data.table

AggMethod 'mean', 'median', 'sum', 'sd', 'coeffvar', 'count'

XVar X-Axis variable name
YVar Y-Axis variable name
ZVar Z-Axis variable name

YVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

XVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

ZVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

FacetRows Defaults to 1 which causes no faceting to occur vertically. Otherwise, supply a

numeric value for the number of output grid rows

FacetCols Defaults to 1 which causes no faceting to occur horizontally. Otherwise, supply

a numeric value for the number of output grid columns

FacetLevels Faceting rows x columns is the max number of levels allowed in a grid. If your

GroupVar has more you can supply the levels to display.

 $\begin{array}{lll} \text{NumberBins} & = 21 \\ \text{NumLevels_Y} & = 20 \\ \text{NumLevels_X} & = 20 \\ \text{Height} & = \text{NULL}, \\ \text{Width} & = \text{NULL}, \\ \end{array}$

Title "Heatmap"
ShowLabels character
Title.YAxis character
Title.XAxis character

Engine "plotly", "echarts4r"

EchartsTheme "dark-blue"

BackGroundColor

color outside of plot window. Rcolors and hex outside of plot window. Rcolors

and hex character

ChartColor = '#001534' FillColor = "#0066ff"

FillColorReverse

character
GridColor = '#ffffff'

Debugging purposes

Author(s)

Adrian Antico

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See Also

```
Other Standard Plots: Plot.Area(), Plot.Bar(), Plot.Box(), Plot.Copula3D(), Plot.Copula(), Plot.CorrMatrix(), Plot.Density(), Plot.HeatMap(), Plot.Histogram(), Plot.Line(), Plot.Pie(), Plot.River(), Plot.Scatter3D(), Plot.Scatter(), Plot.StackedBar(), Plot.Step(), Plot.Violin()
```

Plot.BinaryMetrics

Plot.BinaryMetrics

Description

Line plot of evaluation metrics across thresholds

```
Plot.BinaryMetrics(
  dt = NULL,
  PreAgg = FALSE,
  AggMethod = "mean",
  SampleSize = 100000L,
  XVar = NULL,
  YVar = NULL,
  ZVar = NULL,
 Metrics = c("Utility", "MCC", "Accuracy", "F1_Score", "F2_Score", "F0.5_Score",
    "ThreatScore", "TPR", "TNR", "FNR", "FPR", "FDR", "FOR"),
  GroupVar = NULL,
  YVarTrans = "Identity",
  XVarTrans = "Identity",
  ZVarTrans = "Identity",
  FacetRows = 1,
  FacetCols = 1,
  FacetLevels = NULL,
  CostMatrixWeights = c(0, 1, 1, 0),
  NumberBins = 20,
  Height = NULL,
  Width = NULL,
  Title = "Binary Metrics",
  ShowLabels = FALSE,
  Title.YAxis = NULL,
  Title.XAxis = NULL,
  Engine = "Plotly",
  EchartsTheme = "macarons",
  EchartsLabels = FALSE,
  TimeLine = TRUE,
  X_Scroll = TRUE,
  Y_Scroll = FALSE,
  BackGroundColor = "#6a6969",
  ChartColor = "#001534",
  FillColor = "#0066ff",
  FillColorReverse = "#97ff00",
  GridColor = "white",
```

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```
TextColor = "white",
  ZeroLineColor = "#ffff",
  ZeroLineWidth = 1.25,
  Debug = FALSE
)
```

Arguments

dt source data.table

PreAgg logical
AggMethod character
SampleSize numeric

XVar X-Axis variable name
YVar Y-Axis variable name

ZVar character

Metrics Multiple selection "Utility", "MCC", "Accuracy", "F1_Score", "F2_Score", "F0.5_Score", "ThreatScore"

GroupVar Character variable

YVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

XVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

ZVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

FacetRows Defaults to 1 which causes no faceting to occur vertically. Otherwise, supply a

numeric value for the number of output grid rows

FacetCols Defaults to 1 which causes no faceting to occur horizontally. Otherwise, supply

a numeric value for the number of output grid columns

FacetLevels Faceting rows x columns is the max number of levels allowed in a grid. If your

GroupVar has more you can supply the levels to display.

NumberBins numeric
Title character
ShowLabels character
Title.YAxis character
Title.XAxis character

Engine "Echarts" or "Plotly"

EchartsTheme "auritus", "azul", "bee-inspired", "blue", "caravan", "carp", "chalk", "cool", "dark-bold", "dark", "eduardo"

#' "essos", "forest", "fresh-cut", "fruit", "gray", "green", "halloween", "helianthus", "infographic", "inspire

#" "jazz", "london", "dark", "macarons", "macarons2", "mint", "purple-passion", "red-

velvet", "red", "roma", "royal", #' "sakura", "shine", "tech-blue", "vintage", "walden", "wef", "weforum", "

EchartsLabels character
TimeLine logical
X_Scroll logical
Y_Scroll logical

BackGroundColor

color outside of plot window. Rcolors and hex outside of plot window. Rcolors

and hex character

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```
ChartColor
                 hex character
FillColor
                 hex character
FillColorReverse
                 hex character
GridColor
                 hex character
                 hex character
TextColor
                 hex character
ZeroLineColor
ZeroLineWidth
                 numeric
Debug
                 Debugging purposes
```

Author(s)

Adrian Antico

See Also

```
Other Model Evaluation: Plot.Calibration.Box(), Plot.Calibration.Line(), Plot.ConfusionMatrix(), Plot.Gains(), Plot.Lift(), Plot.PartialDependence.Box(), Plot.PartialDependence.HeatMap(), Plot.PartialDependence.Line(), Plot.Roc(), Plot.Residuals.Histogram(), Plot.Residuals.Scatter(), Plot.ShapImportance(), Plot.VariableImportance()
```

Plot.Box

Plot.Box

Description

Build a box plot by simply passing arguments to a single function. It will sample your data using SampleSize number of rows. Sampled data is randomized.

```
Plot.Box(
  dt = NULL,
  SampleSize = 100000L,
  XVar = NULL,
  YVar = NULL,
  GroupVar = NULL,
  YVarTrans = "Identity",
  XVarTrans = "Identity",
  FacetRows = 1,
  FacetCols = 1,
  FacetLevels = NULL,
  Height = NULL,
  Width = NULL,
  Title = "Box Plot",
  ShowLabels = FALSE,
  Title.YAxis = NULL,
  Title.XAxis = NULL,
  Engine = "Plotly",
  EchartsTheme = "macarons",
```

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```
TimeLine = TimeLine,
 X_Scroll = TRUE,
 Y_Scroll = TRUE,
 BackGroundColor = "#6a6969",
 ChartColor = "#001534",
 FillColor = "#0066ff",
 FillColorReverse = "#97ff00",
 GridColor = "white",
 TextColor = "white"
  ZeroLineColor = "#ffff",
  ZeroLineWidth = 1.25,
  title.fontSize = 22,
  title.fontWeight = "bold",
  title.textShadowColor = "#63aeff",
  title.textShadowBlur = 3,
  title.textShadowOffsetY = 1,
  title.textShadowOffsetX = -1,
 xaxis.fontSize = 14,
 yaxis.fontSize = 14,
 Debug = FALSE
)
```

Arguments

dt source data.table

SampleSize numeric

XVar X-Axis variable name
YVar Y-Axis variable name

GroupVar Character variable

YVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

XVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

FacetRows Defaults to 1 which causes no faceting to occur vertically. Otherwise, supply a

numeric value for the number of output grid rows

FacetCols Defaults to 1 which causes no faceting to occur horizontally. Otherwise, supply

a numeric value for the number of output grid columns

FacetLevels Faceting rows x columns is the max number of levels allowed in a grid. If your

GroupVar has more you can supply the levels to display.

Height = NULL,
Width = NULL,
Title character
ShowLabels character
Title.YAxis character
Title.XAxis character

Engine "Echarts" or "Plotly"

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 $\label{thm:condition} \textbf{EchartsTheme} \qquad \textbf{``auritus'', ``azul'', '`bee-inspired'', ''blue'', '`caravan'', '`carp'', '`chalk'', '`cool'', ''dark-bold'', ''dark'', ''eduardo''} \\$

"" "essos", "forest", "fresh-cut", "fruit", "gray", "green", "halloween", "helianthus", "infographic", "inspire

#' "jazz", "london", "dark", "macarons", "macarons2", "mint", "purple-passion", "red-

velvet","red","roma","royal", #' "sakura","shine","tech-blue","vintage","walden","wef","weforum","

TimeLine Logical X_Scroll logical Y_Scroll logical

BackGroundColor

color outside of plot window. Rcolors and hex outside of plot window. Rcolors

and hex character

ChartColor character hex FillColor character hex

FillColorReverse

character hex

GridColor character hex
TextColor character hex
ZeroLineColor character hex
ZeroLineWidth numeric

Debugging purposes

Author(s)

Adrian Antico

See Also

```
Other Standard Plots: Plot.Area(), Plot.BarPlot3D(), Plot.Bar(), Plot.Copula3D(), Plot.Copula(), Plot.CorrMatrix(), Plot.Density(), Plot.HeatMap(), Plot.Histogram(), Plot.Line(), Plot.Pie(), Plot.River(), Plot.Scatter3D(), Plot.Scatter(), Plot.StackedBar(), Plot.Step(), Plot.Violin()
```

Plot.Calibration.Box Plot.Calibration.Box

Description

This function automatically builds calibration plots and calibration boxplots for model evaluation using regression, quantile regression, and binary and multinomial classification

```
Plot.Calibration.Box(
   dt = NULL,
   SampleSize = 100000L,
   AggMethod = "mean",
   XVar = NULL,
   YVar = NULL,
   GroupVar = NULL,
   YVarTrans = "Identity",
```

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```
XVarTrans = "Identity",
 FacetRows = 1,
 FacetCols = 1,
 FacetLevels = NULL,
 NumberBins = 21,
 Height = NULL,
 Width = NULL,
 Title = "Calibration Plot",
  ShowLabels = FALSE,
 Title.YAxis = NULL,
 Title.XAxis = NULL,
 Engine = "Echarts",
 EchartsTheme = "macarons",
 TimeLine = FALSE,
 X_Scroll = TRUE,
  Y_Scroll = TRUE,
 BackGroundColor = "#6a6969",
 ChartColor = "#001534",
 FillColor = "#0066ff",
 FillColorReverse = "#97ff00",
 GridColor = "white",
 TextColor = "white",
 ZeroLineColor = "#ffff",
 ZeroLineWidth = 1.25,
 Debug = FALSE
)
```

Arguments

dt source data.table

SampleSize numeric AggMethod character

XVar X-Axis variable name
YVar Y-Axis variable name
GroupVar Character variable

YVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

XVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

FacetRows Defaults to 1 which causes no faceting to occur vertically. Otherwise, supply a

numeric value for the number of output grid rows

FacetCols Defaults to 1 which causes no faceting to occur horizontally. Otherwise, supply

a numeric value for the number of output grid columns

FacetLevels Faceting rows x columns is the max number of levels allowed in a grid. If your

GroupVar has more you can supply the levels to display.

NumberBins numeric
Title character
ShowLabels character
Title.YAxis character

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Title.XAxis character

Engine "Echarts" or "Plotly"

EchartsTheme "auritus", "azul", "bee-inspired", "blue", "caravan", "carp", "chalk", "cool", "dark-bold", "dark", "eduardo"

#' "essos", "forest", "fresh-cut", "fruit", "gray", "green", "halloween", "helianthus", "infographic", "inspire

#' "jazz", "london", "dark", "macarons", "macarons2", "mint", "purple-passion", "red-

velvet","red","roma","royal", #' "sakura","shine","tech-blue","vintage","walden","wef","weforum","

TimeLine logical
X_Scroll logical
Y_Scroll logical

BackGroundColor

color outside of plot window. Rcolors and hex outside of plot window. Rcolors

and hex character

ChartColor character hex
FillColor character hex

FillColorReverse

character hex

GridColor character hex

TextColor "Not Implemented"

ZeroLineColor character hex

ZeroLineWidth numeric

Debugging purposes

Author(s)

Adrian Antico

See Also

```
Other Model Evaluation: Plot.BinaryMetrics(), Plot.Calibration.Line(), Plot.ConfusionMatrix(), Plot.Gains(), Plot.Lift(), Plot.PartialDependence.Box(), Plot.PartialDependence.HeatMap(), Plot.PartialDependence.Line(), Plot.ROC(), Plot.Residuals.Histogram(), Plot.Residuals.Scatter(), Plot.ShapImportance(), Plot.VariableImportance()
```

Plot.Calibration.Line Plot.Calibration.Line

Description

This function automatically builds calibration plots and calibration boxplots for model evaluation using regression, quantile regression, and binary and multinomial classification

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Usage

```
Plot.Calibration.Line(
  dt = NULL,
  AggMethod = "mean",
  XVar = NULL,
  YVar = NULL,
  GroupVar = NULL,
  YVarTrans = "Identity",
  XVarTrans = "Identity",
  FacetRows = 1,
  FacetCols = 1,
  FacetLevels = NULL,
  NumberBins = 21,
  Height = NULL,
  Width = NULL,
  Title = "Calibration Plot",
  ShowLabels = FALSE,
  Title.YAxis = NULL,
  Title.XAxis = NULL,
  Engine = "Echarts",
  EchartsTheme = "macarons",
  TimeLine = FALSE,
  X_Scroll = TRUE,
  Y_Scroll = TRUE,
  BackGroundColor = "#6a6969",
  ChartColor = "#001534",
  FillColor = "#0066ff",
  FillColorReverse = "#97ff00",
  GridColor = "white",
  TextColor = "white"
  ZeroLineColor = "#ffff",
  ZeroLineWidth = 1.25,
  Debug = FALSE
)
```

source data.table

Arguments dt

AggMethod	character
XVar	X-Axis variable name
YVar	Y-Axis variable name
GroupVar	Character variable
YVarTrans	"Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standardize", "BoxCox", "YeoJohnson"
XVarTrans	"Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standardize", "BoxCox", "YeoJohnson"
FacetRows	Defaults to 1 which causes no faceting to occur vertically. Otherwise, supply a numeric value for the number of output grid rows

FacetCols Defaults to 1 which causes no faceting to occur horizontally. Otherwise, supply

a numeric value for the number of output grid columns

Plot.Calibration.Line 19

FacetLevels Faceting rows x columns is the max number of levels allowed in a grid. If your

GroupVar has more you can supply the levels to display.

NumberBins numeric Title character ShowLabels character Title.YAxis character Title.XAxis character

"Echarts" or "Plotly" Engine

"auritus", "azul", "bee-inspired", "blue", "caravan", "carp", "chalk", "cool", "dark-bold", "dark", "eduardo" #' "essos", "forest", "fresh-cut", "fruit", "gray", "green", "halloween", "helianthus", "infographic", "inspire

#' "jazz", "london", "dark", "macarons", "macarons2", "mint", "purple-passion", "red-

velvet","red","roma","royal", #' "sakura", "shine", "tech-blue", "vintage", "walden", "wef", "weforum", "

TimeLine logical X_Scroll logical Y_Scroll logical

BackGroundColor

EchartsTheme

color outside of plot window. Rcolors and hex outside of plot window. Rcolors

and hex character

ChartColor character hex FillColor character hex

FillColorReverse

character hex

GridColor character hex

TextColor "Not Implemented"

ZeroLineColor character hex

ZeroLineWidth numeric

Debug Debugging purposes

SampleSize numeric

Author(s)

Adrian Antico

See Also

```
Other Model Evaluation: Plot.BinaryMetrics(), Plot.Calibration.Box(), Plot.ConfusionMatrix(),
Plot.Gains(), Plot.Lift(), Plot.PartialDependence.Box(), Plot.PartialDependence.HeatMap(),
Plot.PartialDependence.Line(), Plot.RoC(), Plot.Residuals.Histogram(), Plot.Residuals.Scatter(),
Plot.ShapImportance(), Plot.VariableImportance()
```

20 Plot.ConfusionMatrix

Plot.ConfusionMatrix Plot.ConfusionMatrix

Description

Generate variable importance plots

Usage

```
Plot.ConfusionMatrix(
  dt = NULL,
  PreAgg = FALSE,
  XVar = NULL,
  YVar = NULL,
  ZVar = "N",
  YVarTrans = "Identity",
  XVarTrans = "Identity",
  ZVarTrans = "Identity",
  FacetRows = 1,
  FacetCols = 1,
  FacetLevels = NULL,
  NumberBins = 21,
  NumLevels_X = 50,
  NumLevels_Y = 50,
  Height = NULL,
  Width = NULL,
  Title = "Confusion Matrix",
  ShowLabels = FALSE,
  Title.YAxis = NULL,
  Title.XAxis = NULL,
  Engine = "Plotly",
  EchartsTheme = "macarons",
  TimeLine = TRUE,
  X_Scroll = TRUE,
  Y_Scroll = TRUE,
  BackGroundColor = "#6a6969",
  ChartColor = "#001534",
  FillColor = "#0066ff",
  FillColorReverse = "#97ff00",
  GridColor = "white",
  TextColor = "white",
  ZeroLineColor = "#ffff",
  ZeroLineWidth = 1.25,
  AggMethod = "count",
  GroupVar = NULL,
  Debug = FALSE
)
```

Arguments

dt source data.table

Plot.ConfusionMatrix 21

PreAgg **FALSE**

XVar Column name of X-Axis variable. If NULL then ignored YVar Column name of Y-Axis variable. If NULL then ignored

7Var

YVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

"Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-**XVarTrans**

ize", "BoxCox", "YeoJohnson"

ZVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

FacetRows Defaults to 1 which causes no faceting to occur vertically. Otherwise, supply a

numeric value for the number of output grid rows

Defaults to 1 which causes no faceting to occur horizontally. Otherwise, supply FacetCols

a numeric value for the number of output grid columns

FacetLevels Faceting rows x columns is the max number of levels allowed in a grid. If your

GroupVar has more you can supply the levels to display.

NumberBins = 21,

NumLevels X = NumLevels_Y, NumLevels_Y = NumLevels X,

Title title ShowLabels character Title.YAxis character Title.XAxis character

'Plotly' or "Echarts" Engine

EchartsTheme "auritus", "azul", "bee-inspired", "blue", "caravan", "carp", "chalk", "cool", "dark-bold", "dark", "eduardo"

#' "essos", "forest", "fresh-cut", "fruit", "gray", "green", "halloween", "helianthus", "infographic", "inspire "based on the state of the state of

velvet","red","roma","royal", #' "sakura","shine","tech-blue","vintage","walden","wef","weforum","

TimeLine logical

BackGroundColor

color outside of plot window. Rcolors and hex outside of plot window. Rcolors

and hex character

ChartColor 'lightsteelblue'

'gray' FillColor

FillColorReverse

character hex

GridColor 'white' TextColor 'darkblue' = '#ffff' ZeroLineColor

AggMethod Choose from 'mean', 'sum', 'sd', and 'median'

GroupVar = NULL

Debug Debugging purposes 22 Plot.Copula

Author(s)

Adrian Antico

See Also

```
Other Model Evaluation: Plot.BinaryMetrics(), Plot.Calibration.Box(), Plot.Calibration.Line(), Plot.Gains(), Plot.Lift(), Plot.PartialDependence.Box(), Plot.PartialDependence.HeatMap(), Plot.PartialDependence.Line(), Plot.Roc(), Plot.Residuals.Histogram(), Plot.Residuals.Scatter(), Plot.ShapImportance(), Plot.VariableImportance()
```

Plot.Copula

Plot.Copula

Description

Build a copula plot by simply passing arguments to a single function. It will sample your data using SampleSize number of rows. Sampled data is randomized.

```
Plot.Copula(
  dt = NULL,
  SampleSize = 30000L,
  XVar = NULL,
  YVar = NULL,
  GroupVar = NULL,
  YVarTrans = "Identity",
  XVarTrans = "Identity",
  FacetRows = 1,
  FacetCols = 1,
  FacetLevels = NULL,
  Height = NULL,
  Width = NULL,
  Title = "Copula Plot",
  ShowLabels = FALSE,
  Title.YAxis = NULL,
  Title.XAxis = NULL,
  Engine = "Plotly",
  EchartsTheme = "dark-blue",
  TimeLine = FALSE,
  X_Scroll = TRUE,
  Y_Scroll = TRUE,
  BackGroundColor = "#6a6969",
  ChartColor = "#001534",
  FillColor = "#0066ff",
  FillColorReverse = "#97ff00",
  GridColor = "white"
  TextColor = "white",
  ZeroLineColor = "#ffff",
  ZeroLineWidth = 1.25,
  yaxis.fontSize = 14,
```

Plot.Copula 23

```
xaxis.fontSize = 14,
title.fontSize = 22,
title.fontWeight = "bold",
title.textShadowColor = "#63aeff",
title.textShadowBlur = 3,
title.textShadowOffsetY = 1,
title.textShadowOffsetX = -1,
Debug = FALSE
)
```

Arguments

dt source data.table

SampleSize An integer for the number of rows to use. Sampled data is randomized. If NULL

then ignored

XVar X-Axis variable name YVar Y-Axis variable name

GroupVar Requires an XVar and YVar already be defined

YVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

XVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

FacetRows Defaults to 1 which causes no faceting to occur vertically. Otherwise, supply a

numeric value for the number of output grid rows

FacetCols Defaults to 1 which causes no faceting to occur horizontally. Otherwise, supply

a numeric value for the number of output grid columns

FacetLevels Faceting rows x columns is the max number of levels allowed in a grid. If your

GroupVar has more you can supply the levels to display.

Height = NULL,
Width = NULL,
Title 'Copula Plot'
ShowLabels character
Title.YAxis character
Title.XAxis character
Engine = "Plotly",

TimeLine Logical
X_Scroll logical
Y_Scroll logical

BackGroundColor

EchartsTheme

color outside of plot window. Rcolors and hex outside of plot window. Rcolors

and hex character

= "dark-blue",

ChartColor 'lightsteelblue'

FillColor 'gray' FillColorReverse

character

24 Plot.Copula3D

```
GridColor 'white'
TextColor 'darkblue'
ZeroLineColor = '#ffff',
ZeroLineWidth = 2,
Debug Debugging purposes
```

Author(s)

Adrian Antico

See Also

```
Other Standard Plots: Plot.Area(), Plot.BarPlot3D(), Plot.Bar(), Plot.Box(), Plot.Copula3D(), Plot.CorrMatrix(), Plot.Density(), Plot.HeatMap(), Plot.Histogram(), Plot.Line(), Plot.Pie(), Plot.River(), Plot.Scatter3D(), Plot.Scatter(), Plot.StackedBar(), Plot.Step(), Plot.Violin()
```

Plot.Copula3D

Plot.Copula3D

Description

Build a 3D-copula plot by simply passing arguments to a single function. It will sample your data using SampleSize number of rows. Sampled data is randomized.

```
Plot.Copula3D(
  dt = NULL,
  SampleSize = 1e+05,
  XVar = NULL,
  YVar = NULL,
  ZVar = NULL,
  YVarTrans = "Identity",
  XVarTrans = "Identity",
  ZVarTrans = "Identity",
  FacetRows = 1,
  FacetCols = 1,
  FacetLevels = NULL,
  GroupVar = NULL,
  Height = NULL,
  Width = NULL,
  Title = "Copula 3D",
  ShowLabels = FALSE,
  Title.YAxis = NULL,
  Title.XAxis = NULL,
  Engine = "Plotly",
  EchartsTheme = "dark-blue",
  TimeLine = FALSE,
  BackGroundColor = "#6a6969",
  ChartColor = "#001534",
```

Plot.Copula3D 25

```
FillColor = "#0066ff",
FillColorReverse = "#97ff00".
GridColor = "white",
TextColor = "white",
ZeroLineColor = "#ffff",
ZeroLineWidth = 1.25,
title.fontSize = 22,
title.fontWeight = "bold",
title.textShadowColor = "#63aeff",
title.textShadowBlur = 3,
title.textShadowOffsetY = 1,
title.textShadowOffsetX = -1,
yaxis.fontSize = 14,
xaxis.fontSize = 14,
zaxis.fontSize = 14,
Debug = FALSE
```

Arguments

dt source data.table

SampleSize An integer for the number of rows to use. Sampled data is randomized. If NULL

then ignored

XVar X-Axis variable name
YVar Y-Axis variable name
ZVar Z-Axis variable name

YVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

XVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

ZVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

FacetRows Defaults to 1 which causes no faceting to occur vertically. Otherwise, supply a

numeric value for the number of output grid rows

FacetCols Defaults to 1 which causes no faceting to occur horizontally. Otherwise, supply

a numeric value for the number of output grid columns

FacetLevels Faceting rows x columns is the max number of levels allowed in a grid. If your

GroupVar has more you can supply the levels to display.

GroupVar Requires an XVar and YVar already be defined

 $\label{eq:height} \begin{array}{ll} \mbox{Height} & = \mbox{NULL}, \\ \mbox{Width} & = \mbox{NULL}, \end{array}$

Title 'Copula3D Plot'

ShowLabels character
Title.YAxis character
Title.XAxis character
Engine = "Plotly"
EchartsTheme = "dark-blue"

26 Plot.CorrMatrix

```
TimeLine
                  Logical
BackGroundColor
                  color outside of plot window. Rcolors and hex outside of plot window. Rcolors
                  and hex character
ChartColor
                  'lightsteelblue'
                  'gray'
FillColor
FillColorReverse
                  character
                  'white'
GridColor
                  'darkblue'
TextColor
```

= '#ffff', ZeroLineColor = 2,

ZeroLineWidth

Debug Debugging purposes

Author(s)

Adrian Antico

See Also

```
Other Standard Plots: Plot.Area(), Plot.BarPlot3D(), Plot.Bar(), Plot.Box(), Plot.Copula(),
Plot.CorrMatrix(), Plot.Density(), Plot.HeatMap(), Plot.Histogram(), Plot.Line(), Plot.Pie(),
Plot.River(), Plot.Scatter3D(), Plot.Scatter(), Plot.StackedBar(), Plot.Step(), Plot.Violin()
```

Plot.CorrMatrix

Plot.CorrMatrix

Description

Build a violin plot by simply passing arguments to a single function. It will sample your data using SampleSize number of rows. Sampled data is randomized.

```
Plot.CorrMatrix(
  dt = NULL,
  CorrVars = NULL,
  CorrVarTrans = "Identity",
  FacetRows = 1,
  FacetCols = 1,
  FacetLevels = NULL,
  Method = "spearman",
  PreAgg = FALSE,
  Height = NULL,
  Width = NULL,
  Title = "Correlation Matrix",
  ShowLabels = FALSE,
  Title.YAxis = NULL,
  Title.XAxis = NULL,
```

Plot.CorrMatrix 27

```
Engine = "Plotly",
 EchartsTheme = "macarons",
  X_Scroll = TRUE,
  Y_Scroll = TRUE,
 BackGroundColor = "#6a6969",
  ChartColor = "#001534",
 FillColor = "#0066ff",
 FillColorReverse = "#97ff00",
 GridColor = "white",
  TextColor = "white",
  title.fontSize = 22,
  title.fontWeight = "bold",
  title.textShadowColor = "#63aeff",
  title.textShadowBlur = 3,
  title.textShadowOffsetY = 1,
  title.textShadowOffsetX = -1,
 yaxis.fontSize = 14,
 xaxis.fontSize = 14,
 Debug = FALSE
)
```

Arguments

dt source data.table

CorrVars vector of variable names

FacetRows Defaults to 1 which causes no faceting to occur vertically. Otherwise, supply a

numeric value for the number of output grid rows

FacetCols Defaults to 1 which causes no faceting to occur horizontally. Otherwise, supply

a numeric value for the number of output grid columns

FacetLevels Faceting rows x columns is the max number of levels allowed in a grid. If your

GroupVar has more you can supply the levels to display.

Method character PreAgg logical Height = NULL, Width = NULL, Title character ShowLabels character Title.YAxis character Title.XAxis character

Engine "Echarts" or "Plotly"

EchartsTheme "auritus", "azul", "bee-inspired", "blue", "caravan", "carp", "chalk", "cool", "dark-bold", "dark", "eduardo"

"" "essos", "forest", "fresh-cut", "fruit", "gray", "green", "halloween", "helianthus", "infographic", "inspire

#' "jazz", "london", "dark", "macarons", "macarons2", "mint", "purple-passion", "red-

velvet", "red", "roma", "royal", #' "sakura", "shine", "tech-blue", "vintage", "walden", "wef", "weforum", "

X_Scroll logical Y_Scroll logical

BackGroundColor

color outside of plot window. Rcolors and hex outside of plot window. Rcolors and hex character

28 Plot.Density

```
ChartColor character hex

FillColor character hex

FillColorReverse character

GridColor character hex

TextColor character hex

Debug Debugging purposes

CorrVarsTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standardize", "BoxCox", "YeoJohnson"
```

Author(s)

Adrian Antico

See Also

```
Other Standard Plots: Plot.Area(), Plot.BarPlot3D(), Plot.Bar(), Plot.Box(), Plot.Copula3D(), Plot.Copula(), Plot.Density(), Plot.HeatMap(), Plot.Histogram(), Plot.Line(), Plot.Pie(), Plot.River(), Plot.Scatter3D(), Plot.Scatter(), Plot.StackedBar(), Plot.Step(), Plot.Violin()
```

Plot.Density

Plot.Density

Description

Density plots, by groups, with transparent continuous plots

```
Plot.Density(
  dt = NULL,
  SampleSize = 100000L,
  YVar = NULL,
  XVar = NULL,
  GroupVar = NULL,
  YVarTrans = "Identity",
  XVarTrans = "Identity",
  FacetRows = 1,
  FacetCols = 1,
  FacetLevels = NULL,
  Height = NULL,
  Width = NULL,
  Title = "Density Plot",
  ShowLabels = FALSE,
  Title.YAxis = NULL,
  Title.XAxis = NULL,
  Engine = "Plotly",
  EchartsTheme = "macarons",
  TimeLine = FALSE,
  X_Scroll = TRUE,
```

Plot.Density 29

```
Y_Scroll = TRUE,
BackGroundColor = "#6a6969",
ChartColor = "#001534",
FillColor = "#0066ff",
FillColorReverse = "#97ff00",
GridColor = "white",
TextColor = "white",
title.fontSize = 22,
title.fontWeight = "bold",
title.textShadowColor = "#63aeff",
title.textShadowBlur = 3,
title.textShadowOffsetY = 1,
title.textShadowOffsetX = -1,
xaxis.fontSize = 14,
yaxis.fontSize = 14,
Debug = FALSE
```

Arguments

dt source data.table SampleSize = 100000L

YVar Y-Axis variable name
XVar X-Axis variable name
GroupVar Character variable

YVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

XVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

FacetRows Defaults to 1 which causes no faceting to occur vertically. Otherwise, supply a

numeric value for the number of output grid rows

FacetCols Defaults to 1 which causes no faceting to occur horizontally. Otherwise, supply

a numeric value for the number of output grid columns

FacetLevels Faceting rows x columns is the max number of levels allowed in a grid. If your

GroupVar has more you can supply the levels to display.

Height = NULL, Width = NULL,

Title = "Density Plot"

ShowLabels character
Title.YAxis character
Title.XAxis character

Engine "Echarts" or "Plotly"

EchartsTheme "auritus", "azul", "bee-inspired", "blue", "caravan", "carp", "chalk", "cool", "dark-bold", "dark", "eduardo"

#' "essos", "forest", "fresh-cut", "fruit", "gray", "green", "halloween", "helianthus", "infographic", "inspire

#" "jazz", "london", "dark", "macarons", "macarons2", "mint", "purple-passion", "red-

velvet", "red", "roma", "royal", #' "sakura", "shine", "tech-blue", "vintage", "walden", "wef", "weforum", "

TimeLine logical

30 Plot.Gains

```
logical
X_Scroll
                  logical
Y_Scroll
BackGroundColor
                  color outside of plot window. Rcolors and hex outside of plot window. Rcolors
                  and hex character
                  "#001534",
ChartColor
FillColor
                  "#0066ff",
FillColorReverse
                  "#97ff00",
                  "white",
{\tt GridColor}
TextColor
                  "white",
Debug
                  Debugging purposes
```

See Also

```
Other Standard Plots: Plot.Area(), Plot.BarPlot3D(), Plot.Bar(), Plot.Box(), Plot.Copula3D(), Plot.Copula(), Plot.CorrMatrix(), Plot.HeatMap(), Plot.Histogram(), Plot.Line(), Plot.Pie(), Plot.River(), Plot.Scatter3D(), Plot.Scatter(), Plot.StackedBar(), Plot.Step(), Plot.Violin()
```

Plot.Gains

Plot.Gains

Description

Create a cumulative gains chart

```
Plot.Gains(
  dt = NULL,
  PreAgg = FALSE,
  XVar = NULL,
  YVar = NULL,
  ZVar = "N",
  GroupVar = NULL,
  YVarTrans = "Identity",
  XVarTrans = "Identity"
  ZVarTrans = "Identity",
  FacetRows = 1,
  FacetCols = 1,
  FacetLevels = NULL,
  NumberBins = 20,
  Height = NULL,
  Width = NULL,
  Title = "Gains Plot",
  ShowLabels = FALSE,
  Title.YAxis = NULL,
  Title.XAxis = NULL,
  Engine = "Plotly",
```

Plot.Gains 31

```
EchartsTheme = "macarons",
  TimeLine = TRUE,
  X_Scroll = TRUE,
  Y_Scroll = TRUE,
  BackGroundColor = "#6a6969",
  ChartColor = "#001534",
  FillColorReverse = "#97ff00",
  GridColor = "white",
  TextColor = "white",
  ZeroLineColor = "#ffff",
  ZeroLineWidth = 1.25,
  Debug = FALSE
)
```

Arguments

dt source data.table

PreAgg logical

XVar X-Axis variable name
YVar Y-Axis variable name

ZVar character

GroupVar Character variable

YVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

XVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

ZVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

FacetRows Defaults to 1 which causes no faceting to occur vertically. Otherwise, supply a

numeric value for the number of output grid rows

FacetCols Defaults to 1 which causes no faceting to occur horizontally. Otherwise, supply

a numeric value for the number of output grid columns

FacetLevels Faceting rows x columns is the max number of levels allowed in a grid. If your

GroupVar has more you can supply the levels to display.

NumberBins numeric
Title character
ShowLabels character
Title.YAxis character
Title.XAxis character

Engine "Echarts" or "Plotly"

EchartsTheme "auritus", "azul", "bee-inspired", "blue", "caravan", "carp", "chalk", "cool", "dark-bold", "dark", "eduardo"

#' "essos", "forest", "fresh-cut", "fruit", "gray", "green", "halloween", "helianthus", "infographic", "inspire

#' "jazz", "london", "dark", "macarons", "macarons2", "mint", "purple-passion", "red-

velvet", "red", "roma", "royal", #' "sakura", "shine", "tech-blue", "vintage", "walden", "wef", "weforum", "

TimeLine logical X_Scroll logical

32 Plot.HeatMap

```
Y_Scroll
                 logical
BackGroundColor
                 color outside of plot window. Rcolors and hex outside of plot window. Rcolors
                 and hex character
ChartColor
                 character hex
FillColor
                 character hex
FillColorReverse
                 character hex
GridColor
                 character hex
TextColor
                 character hex
ZeroLineColor
                 character hex
ZeroLineWidth
                 numeric
```

Debugging purposes

Author(s)

Adrian Antico

See Also

```
Other Model Evaluation: Plot.BinaryMetrics(), Plot.Calibration.Box(), Plot.Calibration.Line(), Plot.ConfusionMatrix(), Plot.Lift(), Plot.PartialDependence.Box(), Plot.PartialDependence.HeatMap() Plot.PartialDependence.Line(), Plot.ROC(), Plot.Residuals.Histogram(), Plot.Residuals.Scatter(), Plot.ShapImportance(), Plot.VariableImportance()
```

Plot.HeatMap

Plot.HeatMap

Description

Create heat maps with numeric or categorical dt

```
Plot.HeatMap(
   dt,
   PreAgg = FALSE,
   AggMethod = "mean",
   XVar = NULL,
   YVar = NULL,
   YVarTrans = "Identity",
   XVarTrans = "Identity",
   ZVarTrans = "Identity",
   FacetRows = 1,
   FacetCols = 1,
   FacetLevels = NULL,
   NumberBins = 21,
   NumLevels_Y = 33,
```

Plot.HeatMap 33

```
NumLevels_X = 33,
 Height = NULL,
 Width = NULL,
 Title = "Heatmap",
  ShowLabels = FALSE,
 Title.YAxis = NULL,
 Title.XAxis = NULL,
 Engine = "Plotly",
 EchartsTheme = "dark",
 X_Scroll = TRUE,
  Y_Scroll = TRUE,
 BackGroundColor = "#6a6969",
 ChartColor = "#001534",
 FillColor = "#0066ff",
 FillColorReverse = "#97ff00",
 GridColor = "white",
  TextColor = "white",
  title.fontSize = 22,
  title.fontWeight = "bold",
  title.textShadowColor = "#63aeff",
  title.textShadowBlur = 3,
  title.textShadowOffsetY = 1,
  title.textShadowOffsetX = -1,
 yaxis.fontSize = 14,
  xaxis.fontSize = 14,
 Debug = FALSE
)
```

Arguments

NumLevels_Y

= 20

dt source data.table 'mean', 'median', 'sum', 'sd', 'coeffvar', 'count' AggMethod XVar X-Axis variable name Y-Axis variable name YVar ZVar Z-Axis variable name "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-**YVarTrans** ize", "BoxCox", "YeoJohnson" "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-**XVarTrans** ize", "BoxCox", "YeoJohnson" **ZVarTrans** "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standardize", "BoxCox", "YeoJohnson" Defaults to 1 which causes no faceting to occur vertically. Otherwise, supply a FacetRows numeric value for the number of output grid rows FacetCols Defaults to 1 which causes no faceting to occur horizontally. Otherwise, supply a numeric value for the number of output grid columns FacetLevels Faceting rows x columns is the max number of levels allowed in a grid. If your GroupVar has more you can supply the levels to display. NumberBins = 21

34 Plot.Histogram

```
NumLevels_X
                 = 20
                 = NULL,
Height
Width
                 = NULL,
Title
                 "Heatmap"
ShowLabels
                 character
Title.YAxis
                 character
Title.XAxis
                 character
                 "plotly", "echarts4r"
Engine
                 "dark-blue"
EchartsTheme
BackGroundColor
                 color outside of plot window. Rcolors and hex outside of plot window. Rcolors
                 and hex character
                 = '#001534'
ChartColor
FillColor
                 = "#0066ff"
FillColorReverse
                 character
```

Author(s)

Adrian Antico

 ${\sf GridColor}$

See Also

```
Other Standard Plots: Plot.Area(), Plot.BarPlot3D(), Plot.Bar(), Plot.Box(), Plot.Copula3D(), Plot.Copula(), Plot.CorrMatrix(), Plot.Density(), Plot.Histogram(), Plot.Line(), Plot.Pie(), Plot.River(), Plot.Scatter3D(), Plot.Scatter(), Plot.StackedBar(), Plot.Step(), Plot.Violin()
```

Plot.Histogram

Plot.Histogram

= '#ffffff'

Description

Build a histogram plot by simply passing arguments to a single function. It will sample your data using SampleSize number of rows. Sampled data is randomized.

```
Plot.Histogram(
  dt = NULL,
   SampleSize = 30000L,
  XVar = NULL,
  YVar = NULL,
  GroupVar = NULL,
  YVarTrans = "Identity",
  XVarTrans = "Identity",
  FacetRows = 1,
  FacetCols = 1,
```

Plot.Histogram 35

```
FacetLevels = NULL,
 NumberBins = 30,
 Height = NULL,
 Width = NULL,
 Title = "Histogram",
 ShowLabels = FALSE,
 Title.YAxis = NULL,
 Title.XAxis = NULL,
 Engine = "Plotly",
 EchartsTheme = "macarons",
 TimeLine = FALSE,
 X_Scroll = TRUE,
 Y_Scroll = TRUE,
 BackGroundColor = "#6a6969",
 ChartColor = "#001534",
 FillColor = "#0066ff",
 FillColorReverse = "#97ff00",
 GridColor = "white",
 TextColor = "white",
 ZeroLineWidth = 1.25,
 ZeroLineColor = "white",
 title.fontSize = 22,
 title.fontWeight = "bold",
  title.textShadowColor = "#63aeff",
  title.textShadowBlur = 3,
 title.textShadowOffsetY = 1,
  title.textShadowOffsetX = -1,
 xaxis.fontSize = 14,
 yaxis.fontSize = 14,
 Debug = FALSE
)
```

Arguments

dt	source data.table
SampleSize	An integer for the number of rows to use. Sampled data is randomized. If NULL then ignored
XVar	X-Axis variable name
YVar	Y-Axis variable name
GroupVar	Column name of Group Variable for distinct colored histograms by group levels
YVarTrans	"Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standardize", "BoxCox", "YeoJohnson"
XVarTrans	"Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standardize", "BoxCox", "YeoJohnson"
FacetRows	Defaults to 1 which causes no faceting to occur vertically. Otherwise, supply a numeric value for the number of output grid rows
FacetCols	Defaults to 1 which causes no faceting to occur horizontally. Otherwise, supply a numeric value for the number of output grid columns
FacetLevels	Faceting rows x columns is the max number of levels allowed in a grid. If your GroupVar has more you can supply the levels to display.

36 Plot.Lift

 $\label{eq:NumberBins} \begin{array}{ll} \mbox{NumberBins} & = 30 \\ \mbox{Height} & = \mbox{NULL}, \\ \mbox{Width} & = \mbox{NULL}, \end{array}$

Engine "Echarts" or "Plotly"
EchartsTheme = EchartsTheme,

TimeLine logical X_Scroll logical Y_Scroll logical

BackGroundColor

color outside of plot window. Rcolors and hex outside of plot window. Rcolors

and hex character

ChartColor 'lightsteelblue'

FillColor 'gray' FillColorReverse

character

GridColor 'white'
TextColor 'darkblue'
ZeroLineWidth = 1.25,
ZeroLineColor = "white",

Debugging purposes

Author(s)

Adrian Antico

See Also

Other Standard Plots: Plot.Area(), Plot.BarPlot3D(), Plot.Bar(), Plot.Box(), Plot.Copula3D(), Plot.Copula(), Plot.CorrMatrix(), Plot.Density(), Plot.HeatMap(), Plot.Line(), Plot.Pie(), Plot.River(), Plot.Scatter3D(), Plot.Scatter(), Plot.StackedBar(), Plot.Step(), Plot.Violin()

Plot.Lift

Plot.Lift

Description

Create a cumulative gains chart

```
Plot.Lift(
dt = NULL,
PreAgg = FALSE,
XVar = NULL,
YVar = NULL,
ZVar = "N",
GroupVar = NULL,
```

Plot.Lift 37

```
YVarTrans = "Identity",
  XVarTrans = "Identity",
  ZVarTrans = "Identity",
  FacetRows = 1,
  FacetCols = 1,
  FacetLevels = NULL,
  NumberBins = 20,
  Height = NULL,
  Width = NULL,
  Title = "Confusion Matrix",
  ShowLabels = FALSE,
  Title.YAxis = NULL,
  Title.XAxis = NULL,
  Engine = "Plotly",
  EchartsTheme = "macarons",
  TimeLine = TRUE,
  X_Scroll = TRUE,
  Y_Scroll = TRUE,
  BackGroundColor = "#6a6969",
  ChartColor = "#001534",
  FillColor = "#0066ff",
  FillColorReverse = "#97ff00",
  GridColor = "white",
  TextColor = "white"
  ZeroLineColor = "#ffff",
  ZeroLineWidth = 1.25,
  Debug = FALSE
)
```

Arguments

dt source data.table

PreAgg logical

XVar X-Axis variable name
YVar Y-Axis variable name

ZVar character

GroupVar Character variable

YVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

XVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

ZVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

FacetRows Defaults to 1 which causes no faceting to occur vertically. Otherwise, supply a

numeric value for the number of output grid rows

FacetCols Defaults to 1 which causes no faceting to occur horizontally. Otherwise, supply

a numeric value for the number of output grid columns

FacetLevels Faceting rows x columns is the max number of levels allowed in a grid. If your

GroupVar has more you can supply the levels to display.

38 Plot.Line

NumberBins numeric
Title character
ShowLabels character
Title.YAxis character
Title.XAxis character

Engine "Echarts" or "Plotly"

EchartsTheme "auritus"."azul"."bee

"auritus", "azul", "bee-inspired", "blue", "caravan", "carp", "chalk", "cool", "dark-bold", "dark", "eduardo" #', "essos", "forest", "fresh-cut", "fruit", "gray", "green", "halloween", "helianthus", "infographic", "inspired", "inspired", "inspired", "caravan", "carp", "chalk", "cool", "dark-bold", "dark", "eduardo" #', "essos", "forest", "fresh-cut", "fruit", "gray", "green", "halloween", "helianthus", "infographic", "inspired", "caravan", "carp", "caravan", "carp", "chalk", "cool", "dark-bold", "dark", "eduardo" #', "essos", "forest", "forest", "fruit", "gray", "green", "halloween", "helianthus", "infographic", "inspired", "caravan", "carp", "carp", "caravan", "carp", "car

#' "jazz", "london", "dark", "macarons", "macarons2", "mint", "purple-passion", "red-

velvet","red","roma","royal", #' "sakura","shine","tech-blue","vintage","walden","wef","weforum","

TimeLine logical X_Scroll logical Y_Scroll logical

BackGroundColor

color outside of plot window. Rcolors and hex outside of plot window. Rcolors

and hex character

ChartColor character hex FillColor character hex

FillColorReverse

character hex

GridColor character hex
TextColor character hex
ZeroLineColor character hex
ZeroLineWidth numeric

Debug Debugging purposes

Author(s)

Adrian Antico

See Also

Other Model Evaluation: Plot.BinaryMetrics(), Plot.Calibration.Box(), Plot.Calibration.Line(), Plot.ConfusionMatrix(), Plot.Gains(), Plot.PartialDependence.Box(), Plot.PartialDependence.HeatMap(Plot.PartialDependence.Line(), Plot.ROC(), Plot.Residuals.Histogram(), Plot.Residuals.Scatter(), Plot.ShapImportance(), Plot.VariableImportance()

Plot.Line Plot.Line

Description

This function automatically builds calibration plots and calibration boxplots for model evaluation using regression, quantile regression, and binary and multinomial classification

Plot.Line 39

Usage

```
Plot.Line(
  dt = NULL,
  AggMethod = "mean",
  PreAgg = TRUE,
  Engine = "Echarts",
  XVar = NULL,
  YVar = NULL,
  GroupVar = NULL,
  YVarTrans = "Identity",
  XVarTrans = "Identity",
  FacetRows = 1,
  FacetCols = 1,
  FacetLevels = NULL,
  Height = NULL,
  Width = NULL,
  Title = "Line Plot",
  ShowLabels = FALSE,
  Title.YAxis = NULL,
  Title.XAxis = NULL,
  EchartsTheme = "macarons",
  X_Scroll = FALSE,
  Y_Scroll = FALSE,
  TimeLine = TRUE,
  Area = FALSE,
  Alpha = 0.5,
  Smooth = TRUE,
  ShowSymbol = FALSE,
  BackGroundColor = "#6a6969",
  ChartColor = "#001534",
  FillColor = "#0066ff",
  FillColorReverse = "#97ff00",
  GridColor = "white",
  TextColor = "white",
  ZeroLineColor = "#ffff",
  ZeroLineWidth = 1.25,
  title.fontSize = 22,
  title.fontWeight = "bold",
  title.textShadowColor = "#63aeff",
  title.textShadowBlur = 3,
  title.textShadowOffsetY = 1,
  title.textShadowOffsetX = -1,
  xaxis.fontSize = 14,
  yaxis.fontSize = 14,
  DarkMode = FALSE,
  Debug = FALSE
)
```

Arguments

```
dt source data.table
AggMethod character
```

40 Plot.Line

PreAgg logical

Engine "Echarts" or "Plotly"

XVar X-Axis variable name

YVar Y-Axis variable name

GroupVar One Grouping Variable

YVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

XVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

FacetRows Defaults to 1 which causes no faceting to occur vertically. Otherwise, supply a

numeric value for the number of output grid rows

FacetCols Defaults to 1 which causes no faceting to occur horizontally. Otherwise, supply

a numeric value for the number of output grid columns

FacetLevels Faceting rows x columns is the max number of levels allowed in a grid. If your

GroupVar has more you can supply the levels to display.

Height = NULL,
Width = NULL,
Title "Title"
ShowLabels character
Title.YAxis character
Title.XAxis character

EchartsTheme Provide an "Echarts" theme

X_Scroll logical
Y_Scroll logical
TimeLine Logical
Area logical

Alpha 0 to 1 for setting transparency

BackGroundColor

color outside of plot window. Rcolors and hex

ChartColor color FillColor color FillColorReverse

character

GridColor color

TextColor "Not Implemented"

ZeroLineColor color
ZeroLineWidth 1
DarkMode FALSE

Debugging purposes

Author(s)

Adrian Antico

See Also

```
Other Standard Plots: Plot.Area(), Plot.BarPlot3D(), Plot.Bar(), Plot.Box(), Plot.Copula3D(), Plot.Copula(), Plot.CorrMatrix(), Plot.Density(), Plot.HeatMap(), Plot.Histogram(), Plot.Pie(), Plot.River(), Plot.Scatter3D(), Plot.Scatter(), Plot.StackedBar(), Plot.Step(), Plot.Violin()
```

```
Plot.PartialDependence.Box
```

Plot.PartialDependence.Box

Description

This function automatically builds partial dependence calibration plots

```
Plot.PartialDependence.Box(
  dt = NULL,
  PreAgg = FALSE,
  SampleSize = 100000L,
  XVar = NULL,
  YVar = NULL,
  ZVar = NULL,
  GroupVar = NULL,
  YVarTrans = "Identity",
  XVarTrans = "Identity",
  ZVarTrans = "Identity",
  FacetRows = 1,
  FacetCols = 1,
  FacetLevels = NULL,
  NumberBins = 20,
  AggMethod = "mean",
  Height = NULL,
  Width = NULL,
  Title = "Gains Plot",
  ShowLabels = FALSE,
  Title.YAxis = NULL,
  Title.XAxis = NULL,
  Engine = "Plotly",
  EchartsTheme = "macarons",
  EchartsLabels = FALSE,
  TimeLine = TRUE,
  X_Scroll = TRUE,
  Y_Scroll = FALSE,
  BackGroundColor = "#6a6969",
  ChartColor = "#001534",
  FillColor = "#0066ff",
```

```
FillColorReverse = "#97ff00",
GridColor = "white",
TextColor = "white",
ZeroLineColor = "#ffff",
ZeroLineWidth = 1.25,
Debug = FALSE
)
```

Arguments

dt source data.table

PreAgg logical SampleSize numeric

XVar X-Axis variable name
YVar Y-Axis variable name

ZVar character

GroupVar Character variable

YVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

XVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

ZVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

FacetRows Defaults to 1 which causes no faceting to occur vertically. Otherwise, supply a

numeric value for the number of output grid rows

FacetCols Defaults to 1 which causes no faceting to occur horizontally. Otherwise, supply

a numeric value for the number of output grid columns

FacetLevels Faceting rows x columns is the max number of levels allowed in a grid. If your

GroupVar has more you can supply the levels to display.

NumberBins numeric
AggMethod character
Title character
ShowLabels character
Title.YAxis character
Title.XAxis character

Engine "Echarts" or "Plotly"

EchartsTheme "auritus", "azul", "bee-inspired", "blue", "caravan", "carp", "chalk", "cool", "dark-bold", "dark", "eduardo"

#" "essos", "forest", "fresh-cut", "fruit", "gray", "green", "halloween", "helianthus", "infographic", "inspire

 $\verb|#","| jazz"," london"," dark"," macarons"," macarons 2"," mint"," purple-passion"," red-passion"," red-passion"," london"," dark"," macarons 2"," mint"," purple-passion"," red-passion"," red-passio$

velvet","red","roma","royal", #' "sakura","shine","tech-blue","vintage","walden","wef","weforum","

EchartsLabels character
TimeLine logical
X_Scroll logical
Y_Scroll logical

BackGroundColor

color outside of plot window. Rcolors and hex outside of plot window. Rcolors

and hex character

ChartColor hex character
FillColor hex character

 ${\tt FillColorReverse}$

hex character
GridColor hex character
TextColor hex character
ZeroLineColor hex character
ZeroLineWidth numeric

Debugging purposes

Author(s)

Adrian Antico

See Also

```
Other Model Evaluation: Plot.BinaryMetrics(), Plot.Calibration.Box(), Plot.Calibration.Line(), Plot.ConfusionMatrix(), Plot.Gains(), Plot.Lift(), Plot.PartialDependence.HeatMap(), Plot.PartialDependence.Line(), Plot.Roc(), Plot.Residuals.Histogram(), Plot.Residuals.Scatter(), Plot.ShapImportance(), Plot.VariableImportance()
```

```
Plot.PartialDependence.HeatMap
```

Plot.PartialDependence.HeatMap

Description

This function automatically builds partial dependence calibration plots

```
Plot.PartialDependence.HeatMap(
   dt = NULL,
   XVar = NULL,
   YVar = NULL,
   ZVar = NULL,
   GroupVar = NULL,
   YVarTrans = "Identity",
   XVarTrans = "Identity",
   ZVarTrans = "Identity",
   FacetRows = 1,
   FacetCols = 1,
   FacetLevels = NULL,
   NumberBins = 21,
   AggMethod = "mean",
   Height = NULL,
```

```
Width = NULL,
 Title = "Gains Plot",
 ShowLabels = FALSE,
 Title.YAxis = NULL,
  Title.XAxis = NULL,
 Engine = "Plotly",
 EchartsTheme = "macarons",
 EchartsLabels = FALSE,
 TimeLine = TRUE,
 X_Scroll = TRUE,
  Y_Scroll = TRUE,
 BackGroundColor = "#6a6969",
 ChartColor = "#001534",
 FillColor = "#0066ff",
 FillColorReverse = "#97ff00",
 GridColor = "white"
 TextColor = "white",
 ZeroLineColor = "#ffff",
 ZeroLineWidth = 1.25,
 Debug = FALSE
)
```

Arguments

dt source data.table

XVar X-Axis variable name

YVar Y-Axis variable name

ZVar character

GroupVar Character variable

YVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

XVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

ZVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

FacetRows Defaults to 1 which causes no faceting to occur vertically. Otherwise, supply a

numeric value for the number of output grid rows

FacetCols Defaults to 1 which causes no faceting to occur horizontally. Otherwise, supply

a numeric value for the number of output grid columns

FacetLevels Faceting rows x columns is the max number of levels allowed in a grid. If your

GroupVar has more you can supply the levels to display.

NumberBins numeric
AggMethod character
Title character
ShowLabels character
Title.YAxis character
Title.XAxis character

Engine "Echarts" or "Plotly"

"auritus", "azul", "bee-inspired", "blue", "caravan", "carp", "chalk", "cool", "dark-bold", "dark", "eduardo" EchartsTheme #' "essos", "forest", "fresh-cut", "fruit", "gray", "green", "halloween", "helianthus", "infographic", "inspire #' "jazz", "london", "dark", "macarons", "macarons2", "mint", "purple-passion", "redvelvet","red","roma","royal", #' "sakura", "shine", "tech-blue", "vintage", "walden", "wef", "weforum", " EchartsLabels character logical TimeLine = TRUE, X_Scroll Y_Scroll = TRUE, BackGroundColor color outside of plot window. Rcolors and hex outside of plot window. Rcolors and hex character ChartColor hex character FillColor hex character FillColorReverse hex character GridColor hex character TextColor hex character ZeroLineColor hex character ZeroLineWidth numeric Debug Debugging purposes

Author(s)

Adrian Antico

See Also

```
Other Model Evaluation: Plot.BinaryMetrics(), Plot.Calibration.Box(), Plot.Calibration.Line(), Plot.ConfusionMatrix(), Plot.Gains(), Plot.Lift(), Plot.PartialDependence.Box(), Plot.PartialDependence.Box(), Plot.Residuals.Histogram(), Plot.Residuals.Scatter(), Plot.ShapImportance(), Plot.VariableImportance()
```

```
Plot.PartialDependence.Line
```

Plot.PartialDependence.Line

Description

This function automatically builds partial dependence calibration plots

```
Plot.PartialDependence.Line(
  dt = NULL,
  XVar = NULL,
  YVar = NULL,
  ZVar = NULL,
  YVarTrans = "Identity",
```

```
XVarTrans = "Identity",
 ZVarTrans = "Identity",
 FacetRows = 1,
 FacetCols = 1,
 FacetLevels = NULL,
 GroupVar = NULL,
 NumberBins = 20,
 AggMethod = "mean",
 Height = NULL,
 Width = NULL,
 Title = "Gains Plot",
  ShowLabels = FALSE,
 Title.YAxis = NULL,
 Title.XAxis = NULL,
 Engine = "Plotly",
 EchartsTheme = "macarons",
 EchartsLabels = FALSE,
 TimeLine = TRUE,
 X_Scroll = TRUE,
 Y_Scroll = TRUE,
 BackGroundColor = "#6a6969",
 ChartColor = "#001534",
 FillColor = "#0066ff",
 FillColorReverse = "#97ff00",
 GridColor = "white",
  TextColor = "white",
  ZeroLineColor = "#ffff",
 ZeroLineWidth = 1.25,
 Debug = FALSE
)
```

Arguments

dt source data.table

XVar X-Axis variable name

YVar Y-Axis variable name

ZVar character

YVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

XVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

ZVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

FacetRows Defaults to 1 which causes no faceting to occur vertically. Otherwise, supply a

numeric value for the number of output grid rows

FacetCols Defaults to 1 which causes no faceting to occur horizontally. Otherwise, supply

a numeric value for the number of output grid columns

FacetLevels Faceting rows x columns is the max number of levels allowed in a grid. If your

GroupVar has more you can supply the levels to display.

GroupVar Character variable

NumberBins numeric
AggMethod character
Title character
ShowLabels character
Title.YAxis character
Title.XAxis character

Engine "Echarts" or "Plotly"

"auritus", "azul", "bee-inspired", "blue", "caravan", "carp", "chalk", "cool", "dark-bold", "dark", "eduardo" #' "essos", "forest", "fresh-cut", "fruit", "gray", "green", "halloween", "helianthus", "infographic", "inspire

#' "jazz", "london", "dark", "macarons", "macarons2", "mint", "purple-passion", "red-

velvet", "red", "roma", "royal", #' "sakura", "shine", "tech-blue", "vintage", "walden", "wef", "weforum", "

EchartsLabels character

TimeLine logical $X_Scroll = TRUE$, $Y_Scroll = TRUE$

BackGroundColor

EchartsTheme

color outside of plot window. Rcolors and hex outside of plot window. Rcolors

and hex character

ChartColor hex character
FillColor hex character

FillColorReverse

hex character

GridColor hex character
TextColor hex character
ZeroLineColor hex character

ZeroLineWidth numeric

Debugging purposes

Author(s)

Adrian Antico

See Also

Other Model Evaluation: Plot.BinaryMetrics(), Plot.Calibration.Box(), Plot.Calibration.Line(), Plot.ConfusionMatrix(), Plot.Gains(), Plot.Lift(), Plot.PartialDependence.Box(), Plot.PartialDepende Plot.ROC(), Plot.Residuals.Histogram(), Plot.Residuals.Scatter(), Plot.ShapImportance(), Plot.VariableImportance()

48 Plot.Pie

Plot.Pie

Plot.Pie

Description

Build a pie chart by simply passing arguments to a single function

```
Plot.Pie(
  Engine = "Plotly",
  dt = NULL,
  PreAgg = FALSE,
  XVar = NULL,
  YVar = NULL,
  GroupVar = NULL,
  YVarTrans = "Identity",
  XVarTrans = "Identity",
  FacetRows = 1,
  FacetCols = 1,
  FacetLevels = NULL,
  AggMethod = "mean",
  Height = NULL,
  Width = NULL,
  Title = "Bar Plot",
  ShowLabels = FALSE,
  Title.YAxis = NULL,
  Title.XAxis = NULL,
  EchartsTheme = "macarons",
  TimeLine = TRUE,
  X_Scroll = TRUE,
  Y_Scroll = TRUE,
  BackGroundColor = "#6a6969",
  ChartColor = "#001534",
  FillColor = "#0066ff",
  FillColorReverse = "#97ff00",
  GridColor = "white",
  TextColor = "white",
  ZeroLineColor = "#ffff",
  ZeroLineWidth = 1.25,
  title.fontSize = 22,
  title.fontWeight = "bold",
  title.textShadowColor = "#63aeff",
  title.textShadowBlur = 3,
  title.textShadowOffsetY = 1,
  title.textShadowOffsetX = -1,
  xaxis.fontSize = 14,
  yaxis.fontSize = 14,
  Debug = FALSE
```

Plot.Pie 49

Arguments

Engine 'Plotly' or "Echarts" dt source data.table

PreAgg logical

XVar X-Axis variable name
YVar Y-Axis variable name

GroupVar Column name of Group Variable for distinct colored histograms by group levels

YVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

XVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

FacetRows Defaults to 1 which causes no faceting to occur vertically. Otherwise, supply a

numeric value for the number of output grid rows

FacetCols Defaults to 1 which causes no faceting to occur horizontally. Otherwise, supply

a numeric value for the number of output grid columns

FacetLevels Faceting rows x columns is the max number of levels allowed in a grid. If your

GroupVar has more you can supply the levels to display.

AggMethod Choose from 'mean', 'sum', 'sd', and 'median'

 $\label{eq:height} \begin{array}{ll} \mbox{Height} & = \mbox{NULL}, \\ \mbox{Width} & = \mbox{NULL}, \\ \mbox{Title} & \mbox{title} \end{array}$

ShowLabels character
Title.YAxis character
Title.XAxis character

EchartsTheme "auritus", "azul", "bee-inspired", "blue", "caravan", "carp", "chalk", "cool", "dark-bold", "dark", "eduardo"

cut", "fruit", "gray", "green", "halloween", "helianthus", "infographic", "inspired", "jazz", "london", "dark" passion", "red-velvet", "red", "roma", "royal", "sakura", "shine", "tech-blue", "vintage", "walden", "wef", "walden", "walden", "walden", "wef", "walden", "walden",

TimeLine logical X_Scroll logical Y_Scroll logical

BackGroundColor

color outside of plot window. Rcolors and hex outside of plot window. Rcolors

and hex character

ChartColor 'lightsteelblue'

FillColor 'gray'
FillColorReverse

character

GridColor 'white'

TextColor 'darkblue'

ZeroLineColor = '#ffff'

Debugging purposes

Author(s)

Adrian Antico

See Also

```
Other Standard Plots: Plot.Area(), Plot.BarPlot3D(), Plot.Bar(), Plot.Box(), Plot.Copula3D(), Plot.Copula(), Plot.CorrMatrix(), Plot.Density(), Plot.HeatMap(), Plot.Histogram(), Plot.Line(), Plot.River(), Plot.Scatter3D(), Plot.Scatter(), Plot.StackedBar(), Plot.Step(), Plot.Violin()
```

Plot.Residuals.Histogram

Plot.Residuals.Histogram

Description

Residuals Plot

```
Plot.Residuals.Histogram(
  dt = NULL,
  AggMethod = "mean",
  SampleSize = 1e+05,
  XVar = NULL,
  YVar = NULL,
  GroupVar = NULL,
  YVarTrans = "Identity",
  XVarTrans = "Identity",
  FacetRows = 1,
  FacetCols = 1,
  FacetLevels = NULL,
  NumberBins = 20,
  Height = NULL,
  Width = NULL,
  Title = "Calibration Plot",
  ShowLabels = FALSE,
  Title.YAxis = NULL,
  Title.XAxis = NULL,
  Engine = "Echarts",
  EchartsTheme = "macarons",
  TimeLine = FALSE,
  X_Scroll = TRUE,
  Y_Scroll = TRUE,
  BackGroundColor = "#6a6969",
  ChartColor = "#001534",
  FillColor = "#0066ff",
  FillColorReverse = "#97ff00",
  GridColor = "white",
  TextColor = "white",
  ZeroLineColor = "#ffff",
```

```
ZeroLineWidth = 1.25,
title.fontSize = 22,
title.fontWeight = "bold",
title.textShadowColor = "#63aeff",
title.textShadowBlur = 3,
title.textShadowOffsetY = 1,
title.textShadowOffsetX = -1,
xaxis.fontSize = 14,
yaxis.fontSize = 14,
Debug = FALSE
)
```

Arguments

dt source data.table

AggMethod character SampleSize numeric

XVar X-Axis variable name
YVar Y-Axis variable name
GroupVar Character variable

YVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

XVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

FacetRows Defaults to 1 which causes no faceting to occur vertically. Otherwise, supply a

numeric value for the number of output grid rows

FacetCols Defaults to 1 which causes no faceting to occur horizontally. Otherwise, supply

a numeric value for the number of output grid columns

FacetLevels Faceting rows x columns is the max number of levels allowed in a grid. If your

GroupVar has more you can supply the levels to display.

NumberBins numeric
Title character
ShowLabels character
Title.YAxis character
Title.XAxis character

Engine "Echarts" or "Plotly"

EchartsTheme "auritus", "azul", "bee-inspired", "blue", "caravan", "carp", "chalk", "cool", "dark-bold", "dark", "eduardo"

#' "essos", "forest", "fresh-cut", "fruit", "gray", "green", "halloween", "helianthus", "infographic", "inspire

#' "jazz", "london", "dark", "macarons", "macarons2", "mint", "purple-passion", "red-

velvet","red","roma","royal", #' "sakura","shine","tech-blue","vintage","walden","wef","weforum","

TimeLine logical X_Scroll logical Y_Scroll logical

BackGroundColor

color outside of plot window. Rcolors and hex outside of plot window. Rcolors and hex character

52 Plot.Residuals.Scatter

```
ChartColor character hex
FillColor character hex
FillColorReverse character hex
GridColor character hex
TextColor Not Implemented
ZeroLineColor character hex
ZeroLineWidth numeric
```

Debugging purposes

Author(s)

Debug

Adrian Antico

See Also

```
Other Model Evaluation: Plot.BinaryMetrics(), Plot.Calibration.Box(), Plot.Calibration.Line(), Plot.ConfusionMatrix(), Plot.Gains(), Plot.Lift(), Plot.PartialDependence.Box(), Plot.PartialDependence.Box(), Plot.PartialDependence.Line(), Plot.Roc(), Plot.Residuals.Scatter(), Plot.ShapImportance(), Plot.VariableImportance()
```

Plot.Residuals.Scatter

Plot.Residuals.Scatter

Description

Residuals_2 Plot

```
Plot.Residuals.Scatter(
  dt = NULL,
  AggMethod = "mean",
  SampleSize = 1e+05,
  XVar = NULL,
  YVar = NULL,
  GroupVar = NULL,
  YVarTrans = "Identity",
  XVarTrans = "Identity",
  FacetRows = 1,
  FacetCols = 1,
  FacetLevels = NULL,
  Height = NULL,
  Width = NULL,
  Title = "Calibration Plot",
  ShowLabels = FALSE,
  Title.YAxis = NULL,
  Title.XAxis = NULL,
  Engine = "Echarts",
```

Plot.Residuals.Scatter 53

```
EchartsTheme = "macarons",
  TimeLine = FALSE,
  X_Scroll = TRUE,
  Y_Scroll = TRUE,
  BackGroundColor = "#6a6969",
  ChartColor = "#001534",
  FillColor = "#0066ff",
  FillColorReverse = "#97ff00",
  GridColor = "white",
  TextColor = "white",
  ZeroLineColor = "#ffff",
  ZeroLineWidth = 1.25,
  Debug = FALSE
)
```

Arguments

dt source data.table

AggMethod character SampleSize numeric

XVar X-Axis variable name
YVar Y-Axis variable name
GroupVar Character variable

YVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

XVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

FacetRows Defaults to 1 which causes no faceting to occur vertically. Otherwise, supply a

numeric value for the number of output grid rows

FacetCols Defaults to 1 which causes no faceting to occur horizontally. Otherwise, supply

a numeric value for the number of output grid columns

FacetLevels Faceting rows x columns is the max number of levels allowed in a grid. If your

GroupVar has more you can supply the levels to display.

Title character
ShowLabels character
Title.YAxis character
Title.XAxis character

Engine "Echarts" or "Plotly"

EchartsTheme "auritus", "azul", "bee-inspired", "blue", "caravan", "carp", "chalk", "cool", "dark-bold", "dark", "eduardo"

#' "essos", "forest", "fresh-cut", "fruit", "gray", "green", "halloween", "helianthus", "infographic", "inspire

#' "jazz", "london", "dark", "macarons", "macarons2", "mint", "purple-passion", "red-

velvet", "red", "roma", "royal", #' "sakura", "shine", "tech-blue", "vintage", "walden", "wef", "weforum", "

TimeLine logical
X_Scroll logical
Y_Scroll logical
BackGroundColor

color outside of plot window. Rcolors and hex outside of plot window. Rcolors

and hex character

54 Plot.River

```
ChartColor character hex
FillColor character hex
```

FillColorReverse

character hex

GridColor character hex

TextColor "Not Implemented"

ZeroLineColor character hex
ZeroLineWidth numeric

Debugging purposes

NumberBins numeric

Author(s)

Adrian Antico

See Also

```
Other Model Evaluation: Plot.BinaryMetrics(), Plot.Calibration.Box(), Plot.Calibration.Line(), Plot.ConfusionMatrix(), Plot.Gains(), Plot.Lift(), Plot.PartialDependence.Box(), Plot.PartialDependence.Plot.PartialDependence.Line(), Plot.RoC(), Plot.Residuals.Histogram(), Plot.ShapImportance(), Plot.VariableImportance()
```

Plot.River

Plot.River

Description

This function automatically builds calibration plots and calibration boxplots for model evaluation using regression, quantile regression, and binary and multinomial classification

```
Plot.River(
  dt = NULL,
  AggMethod = "mean",
  PreAgg = TRUE,
  Engine = "Echarts",
  XVar = NULL,
  YVar = NULL,
  GroupVar = NULL,
  YVarTrans = "Identity",
  XVarTrans = "Identity",
  FacetRows = 1,
  FacetCols = 1,
  FacetLevels = NULL,
  Height = NULL,
  Width = NULL,
  Title = "River Plot",
  ShowLabels = FALSE,
```

Plot.River 55

```
Title.YAxis = NULL,
 Title.XAxis = NULL,
 EchartsTheme = "macarons",
 X_Scroll = FALSE,
 Y_Scroll = FALSE,
 TimeLine = TRUE,
  ShowSymbol = FALSE,
 BackGroundColor = "#6a6969",
 ChartColor = "#001534",
 FillColor = "#0066ff",
 FillColorReverse = "#97ff00",
 GridColor = "white",
 TextColor = "white",
  ZeroLineColor = "#ffff",
  ZeroLineWidth = 1.25,
  title.fontSize = 22,
  title.fontWeight = "bold",
  title.textShadowColor = "#63aeff",
  title.textShadowBlur = 3,
  title.textShadowOffsetY = 1,
  title.textShadowOffsetX = -1,
 xaxis.fontSize = 14,
 yaxis.fontSize = 14,
 Debug = FALSE
)
```

source data.table

= NULL,

"Title"

Arguments dt

Height

Width

Title

AggMethod character PreAgg logical "Echarts" or "Plotly" Engine X-Axis variable name XVar Y-Axis variable name YVar GroupVar One Grouping Variable **YVarTrans** "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standardize", "BoxCox", "YeoJohnson" **XVarTrans** "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standardize", "BoxCox", "YeoJohnson" FacetRows Defaults to 1 which causes no faceting to occur vertically. Otherwise, supply a numeric value for the number of output grid rows FacetCols Defaults to 1 which causes no faceting to occur horizontally. Otherwise, supply a numeric value for the number of output grid columns FacetLevels Faceting rows x columns is the max number of levels allowed in a grid. If your GroupVar has more you can supply the levels to display.

56 Plot.ROC

ShowLabels character
Title.YAxis character
Title.XAxis character

EchartsTheme Provide an "Echarts" theme

 X_Scroll logical Y_Scroll logical Y_Scroll Logical Y_Scroll Logical Y_Scroll Y_Scroll Logical Y_Scroll

BackGroundColor

color outside of plot window. Rcolors and hex

ChartColor color FillColor color FillColorReverse

character

GridColor color

TextColor "Not Implemented"

ZeroLineColor color ZeroLineWidth 1

Debug Debugging purposes

Author(s)

Adrian Antico

See Also

```
Other Standard Plots: Plot.Area(), Plot.BarPlot3D(), Plot.Bar(), Plot.Box(), Plot.Copula3D(), Plot.Copula(), Plot.CorrMatrix(), Plot.Density(), Plot.HeatMap(), Plot.Histogram(), Plot.Line(), Plot.Pie(), Plot.Scatter3D(), Plot.Scatter(), Plot.StackedBar(), Plot.Step(), Plot.Violin()
```

Plot.ROC

Plot.ROC

Description

ROC Plot

```
Plot.ROC(
  dt = NULL,
  SampleSize = 1e+05,
  XVar = NULL,
  YVar = NULL,
  GroupVar = NULL,
  YVarTrans = "Identity",
```

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```
XVarTrans = "Identity",
 FacetRows = 1,
 FacetCols = 1,
 FacetLevels = NULL,
 AggMethod = "mean",
 Height = NULL,
 Width = NULL,
 Title = "Calibration Plot",
  ShowLabels = FALSE,
 Title.YAxis = NULL,
 Title.XAxis = NULL,
 Engine = "Echarts",
 EchartsTheme = "macarons",
 TimeLine = FALSE,
 X_Scroll = TRUE,
  Y_Scroll = TRUE,
 BackGroundColor = "#6a6969",
 ChartColor = "#001534",
 FillColor = "#0066ff",
 FillColorReverse = "#97ff00",
 GridColor = "white",
 TextColor = "white",
 ZeroLineColor = "#ffff",
 ZeroLineWidth = 1.25,
 Debug = FALSE
)
```

Arguments

dt source data.table

SampleSize numeric

XVar X-Axis variable name
YVar Y-Axis variable name
GroupVar Character variable

YVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

XVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

FacetRows Defaults to 1 which causes no faceting to occur vertically. Otherwise, supply a

numeric value for the number of output grid rows

FacetCols Defaults to 1 which causes no faceting to occur horizontally. Otherwise, supply

a numeric value for the number of output grid columns

FacetLevels Faceting rows x columns is the max number of levels allowed in a grid. If your

GroupVar has more you can supply the levels to display.

AggMethod character
Title character
ShowLabels character
Title.YAxis character
Title.XAxis character

58 Plot.Scatter

Engine "Echarts" or "Plotly"

EchartsTheme "auritus", "azul", "bee-inspired", "blue", "caravan", "carp", "chalk", "cool", "dark-bold", "dark", "eduardo"

#' "essos", "forest", "fresh-cut", "fruit", "gray", "green", "halloween", "helianthus", "infographic", "inspire

#' "jazz", "london", "dark", "macarons", "macarons2", "mint", "purple-passion", "red-

velvet", "red", "roma", "royal", #' "sakura", "shine", "tech-blue", "vintage", "walden", "wef", "weforum", "

TimeLine logical
X_Scroll logical
Y_Scroll logical

BackGroundColor

color outside of plot window. Rcolors and hex outside of plot window. Rcolors

and hex character

ChartColor character hex FillColor character hex

FillColorReverse

character hex

GridColor character hex
TextColor character hex
ZeroLineColor character hex

ZeroLineWidth numeric

Debugging purposes

NumberBins numeric

Author(s)

Adrian Antico

See Also

Other Model Evaluation: Plot.BinaryMetrics(), Plot.Calibration.Box(), Plot.Calibration.Line(), Plot.ConfusionMatrix(), Plot.Gains(), Plot.Lift(), Plot.PartialDependence.Box(), Plot.PartialDependence.Box(), Plot.PartialDependence.Line(), Plot.Residuals.Histogram(), Plot.Residuals.Scatter(), Plot.ShapImportance(), Plot.VariableImportance()

Plot.Scatter Plot.Scatter

Description

Build a copula plot by simply passing arguments to a single function. It will sample your data using SampleSize number of rows. Sampled data is randomized.

Plot.Scatter 59

Usage

```
Plot.Scatter(
  dt = NULL,
  SampleSize = 30000L,
  XVar = NULL,
  YVar = NULL,
  GroupVar = NULL,
  YVarTrans = "Identity",
  XVarTrans = "Identity",
  FacetRows = 1,
  FacetCols = 1,
  FacetLevels = NULL,
  Height = NULL,
  Width = NULL,
  Title = "Scatter Plot",
  ShowLabels = FALSE,
  Title.YAxis = NULL,
  Title.XAxis = NULL,
  Engine = "Plotly",
  EchartsTheme = "macarons",
  TimeLine = FALSE,
  X_Scroll = TRUE,
  Y_Scroll = TRUE,
  BackGroundColor = "#6a6969",
  ChartColor = "#001534",
  FillColor = "#0066ff",
  FillColorReverse = "#97ff00",
  GridColor = "white",
  TextColor = "white",
  ZeroLineColor = "#ffff",
  ZeroLineWidth = 1.25,
  title.fontSize = 22,
  title.fontWeight = "bold",
  title.textShadowColor = "#63aeff",
  title.textShadowBlur = 3,
  title.textShadowOffsetY = 1,
  title.textShadowOffsetX = -1,
  yaxis.fontSize = 14,
  xaxis.fontSize = 14,
  tooltip.trigger = "axis",
  Debug = FALSE
)
```

Arguments

dt source data.table
SampleSize numeric
XVar X-Axis variable name
YVar Y-Axis variable name
GroupVar Character variable

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YVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standardize", "BoxCox", "YeoJohnson" "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-**XVarTrans** ize", "BoxCox", "YeoJohnson" FacetRows Defaults to 1 which causes no faceting to occur vertically. Otherwise, supply a numeric value for the number of output grid rows FacetCols Defaults to 1 which causes no faceting to occur horizontally. Otherwise, supply a numeric value for the number of output grid columns FacetLevels Faceting rows x columns is the max number of levels allowed in a grid. If your GroupVar has more you can supply the levels to display. = NULL, Height Width = NULL, Title character ShowLabels character Title.YAxis character Title.XAxis character "Echarts" or "Plotly" Engine EchartsTheme "auritus", "azul", "bee-inspired", "blue", "caravan", "carp", "chalk", "cool", "dark-bold", "dark", "eduardo" #' "essos", "forest", "fresh-cut", "fruit", "gray", "green", "halloween", "helianthus", "infographic", "inspire #' "jazz", "london", "dark", "macarons", "macarons2", "mint", "purple-passion", "redvelvet","red","roma","royal", #' "sakura","shine","tech-blue","vintage","walden","wef","weforum"," TimeLine logical X_Scroll logical Y_Scroll logical BackGroundColor color outside of plot window. Rcolors and hex outside of plot window. Rcolors and hex characterb ChartColor character hex

FillColor character hex

FillColorReverse

character

GridColor character hex TextColor character hex ZeroLineColor character hex ZeroLineWidth numeric

Debug Debugging purposes

Author(s)

Adrian Antico

See Also

```
Other Standard Plots: Plot.Area(), Plot.BarPlot3D(), Plot.Bar(), Plot.Box(), Plot.Copula3D(),
Plot.Copula(), Plot.CorrMatrix(), Plot.Density(), Plot.HeatMap(), Plot.Histogram(),
Plot.Line(), Plot.Pie(), Plot.River(), Plot.Scatter3D(), Plot.StackedBar(), Plot.Step(),
Plot. Violin()
```

Plot.Scatter3D 61

Plot.Scatter3D

Plot.Scatter3D

Description

Build a 3D-copula plot by simply passing arguments to a single function. It will sample your data using SampleSize number of rows. Sampled data is randomized.

```
Plot.Scatter3D(
  dt = NULL,
  SampleSize = 1e+05,
  XVar = NULL,
  YVar = NULL,
  ZVar = NULL,
  GroupVar = NULL,
  YVarTrans = "Identity",
  XVarTrans = "Identity",
  ZVarTrans = "Identity",
  FacetRows = 1,
  FacetCols = 1,
  FacetLevels = NULL,
  Height = NULL,
  Width = NULL,
  Title = "3D Scatter",
  ShowLabels = FALSE,
  Title.YAxis = NULL,
  Title.XAxis = NULL,
  Engine = "Plotly",
  EchartsTheme = "macarons",
  TimeLine = FALSE,
  BackGroundColor = "#6a6969",
  ChartColor = "#001534",
  FillColor = "#0066ff",
  FillColorReverse = "#97ff00",
  GridColor = "white",
  TextColor = "white",
  ZeroLineColor = "#ffff",
  ZeroLineWidth = 1.25,
  title.fontSize = 22,
  title.fontWeight = "bold",
  title.textShadowColor = "#63aeff",
  title.textShadowBlur = 3,
  title.textShadowOffsetY = 1,
  title.textShadowOffsetX = -1,
  yaxis.fontSize = 14,
  xaxis.fontSize = 14,
  zaxis.fontSize = 14,
  Debug = FALSE
```

62 Plot.Scatter3D

Arguments

dt source data.table

SampleSize An integer for the number of rows to use. Sampled data is randomized. If NULL

then ignored

XVar X-Axis variable name
YVar Y-Axis variable name
ZVar Z-Axis variable name

GroupVar Requires an XVar and YVar already be defined

YVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

XVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

ZVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

FacetRows Defaults to 1 which causes no faceting to occur vertically. Otherwise, supply a

numeric value for the number of output grid rows

FacetCols Defaults to 1 which causes no faceting to occur horizontally. Otherwise, supply

a numeric value for the number of output grid columns

FacetLevels Faceting rows x columns is the max number of levels allowed in a grid. If your

GroupVar has more you can supply the levels to display.

Height = NULL,
Width = NULL,
Title 'Violin Plot'
ShowLabels character
Title.YAxis character
Title.XAxis character
Engine = "Plotly"

EchartsTheme = "macaron"

TimeLine Logical

BackGroundColor

color outside of plot window. Rcolors and hex outside of plot window. Rcolors

and hex character

ChartColor 'lightsteelblue'

FillColor 'gray'
FillColorReverse

character

GridColor 'white'

TextColor 'darkblue'

ZeroLineColor = '#ffff',

ZeroLineWidth = 2,

Debugging purposes

Plot.ShapImportance 63

Author(s)

Adrian Antico

See Also

```
Other Standard Plots: Plot.Area(), Plot.BarPlot3D(), Plot.Bar(), Plot.Box(), Plot.Copula3D(), Plot.Copula(), Plot.CorrMatrix(), Plot.Density(), Plot.HeatMap(), Plot.Histogram(), Plot.Line(), Plot.Pie(), Plot.River(), Plot.Scatter(), Plot.StackedBar(), Plot.Step(), Plot.Violin()
```

Plot.ShapImportance Plot.ShapImportance

Description

Plot.ShapImportance variable importance

```
Plot.ShapImportance(
  dt,
  PreAgg = FALSE,
  AggMethod = "meanabs",
  YVar = NULL,
  GroupVar = NULL,
  YVarTrans = "Identity",
  XVarTrans = "Identity",
  ZVarTrans = "Identity",
  FacetRows = 1,
  FacetCols = 1,
  FacetLevels = NULL,
  NumberBins = 21,
  NumLevels_X = 33,
  NumLevels_Y = 33,
  Height = NULL,
  Width = NULL,
  Title = "Shap Importance",
  ShowLabels = FALSE,
  Title.YAxis = NULL,
  Title.XAxis = NULL,
  Engine = "Plotly",
  EchartsTheme = "dark",
  X_Scroll = TRUE,
  Y_Scroll = TRUE,
  BackGroundColor = "#6a6969",
  ChartColor = "#001534",
  FillColor = "#0066ff",
  FillColorReverse = "#97ff00",
  GridColor = "white",
  TextColor = "white",
  Debug = FALSE
)
```

Arguments

dt source data.table

AggMethod "mean", "median", "sum", "sd", "skewness", "kurtosis", "coeffvar", "meanabs",

"medianabs", "sumabs", "sdabs", "skewnessabs", "kurtosisabs", "CoeffVarabs"

YVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

XVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

ZVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

FacetRows Defaults to 1 which causes no faceting to occur vertically. Otherwise, supply a

numeric value for the number of output grid rows

FacetCols Defaults to 1 which causes no faceting to occur horizontally. Otherwise, supply

a numeric value for the number of output grid columns

FacetLevels Faceting rows x columns is the max number of levels allowed in a grid. If your

GroupVar has more you can supply the levels to display.

 $\begin{array}{ll} \mbox{NumberBins} & = 21 \\ \mbox{NumLevels_X} & = 20 \\ \mbox{NumLevels_Y} & = 20 \end{array}$

Title "Heatmap"
ShowLabels character
Title.YAxis character
Title.XAxis character

Engine "plotly", "echarts4r"

EchartsTheme "dark-blue"

BackGroundColor

color outside of plot window. Rcolors and hex outside of plot window. Rcolors

and hex character

 $\begin{array}{ll} \text{ChartColor} &= \text{'$\#001534'} \\ \text{FillColor} &= \text{"$\#0066ff''} \end{array}$

FillColorReverse

character hex

GridColor = '#ffffff' Debug = FALSE

Author(s)

Adrian Antico

See Also

Other Model Evaluation: Plot.BinaryMetrics(), Plot.Calibration.Box(), Plot.Calibration.Line(), Plot.ConfusionMatrix(), Plot.Gains(), Plot.Lift(), Plot.PartialDependence.Box(), Plot.PartialDependence.Box(), Plot.PartialDependence.Line(), Plot.Roc(), Plot.Residuals.Histogram(), Plot.Residuals.Scatter(), Plot.VariableImportance()

Plot.StackedBar 65

Plot.StackedBar

Plot.StackedBar

Description

Build a stacked bar plot vs a grouped bar plot

```
Plot.StackedBar(
  dt = NULL,
  PreAgg = FALSE,
  XVar = NULL,
  YVar = NULL,
  GroupVar = NULL,
  YVarTrans = "Identity",
  XVarTrans = "Identity",
  FacetRows = 1,
  FacetCols = 1,
  FacetLevels = NULL,
  AggMethod = "mean",
  Height = NULL,
  Width = NULL,
  Title = "Stacked Bar",
  Title.YAxis = NULL,
  Title.XAxis = NULL,
  ShowLabels = FALSE,
  Engine = "Echarts",
  EchartsTheme = "macarons",
  TimeLine = TRUE,
  X_Scroll = TRUE,
  Y_Scroll = TRUE,
  BackGroundColor = "#6a6969",
  ChartColor = "#001534",
  FillColor = "#0066ff",
  FillColorReverse = "#97ff00",
  GridColor = "white",
  TextColor = "white",
  ZeroLineColor = "#ffff",
  ZeroLineWidth = 1.25,
  title.fontSize = 22,
  title.fontWeight = "bold",
  title.textShadowColor = "#63aeff",
  title.textShadowBlur = 3,
  title.textShadowOffsetY = 1,
  title.textShadowOffsetX = -1,
  yaxis.fontSize = 14,
  xaxis.fontSize = 14,
  Debug = FALSE
```

66 Plot.StackedBar

Arguments

dt source data.table

PreAgg logical

XVar X-Axis variable name
YVar Y-Axis variable name

GroupVar Column name of Group Variable for distinct colored histograms by group levels

YVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

XVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

FacetRows Defaults to 1 which causes no faceting to occur vertically. Otherwise, supply a

numeric value for the number of output grid rows

FacetCols Defaults to 1 which causes no faceting to occur horizontally. Otherwise, supply

a numeric value for the number of output grid columns

FacetLevels Faceting rows x columns is the max number of levels allowed in a grid. If your

GroupVar has more you can supply the levels to display.

AggMethod Choose from 'mean', 'sum', 'sd', and 'median'

Height NULL
Width NULL
Title title

Title.YAxis NULL. If NULL, YVar name will be used
Title.XAxis NULL. If NULL, XVar name will be used

ShowLabels logical

Engine 'Plotly' or "Echarts"

EchartsTheme "auritus", "azul", "bee-inspired", "blue", "caravan", "carp", "chalk", "cool", "dark-bold", "dark", "eduardo"

#''' essos'', "forest'', "fresh-cut'', "fruit'', "gray'', "green'', "halloween'', "helianthus'', "infographic'', "inspired by the property of the property o

#' "jazz", "london", "dark", "macarons", "macarons2", "mint", "purple-passion", "red-

velvet", "red", "roma", "royal", #' "sakura", "shine", "tech-blue", "vintage", "walden", "wef", "weforum", "

TimeLine logical X_Scroll logical Y_Scroll logical

BackGroundColor

color outside of plot window. Rcolors and hex outside of plot window. Rcolors

and hex character

ChartColor 'lightsteelblue'

FillColor 'gray'
FillColorReverse

character

GridColor 'white'
TextColor 'darkblue'
ZeroLineColor '#ffff'

Debugging purposes

Plot.StandardPlots 67

Author(s)

Adrian Antico

See Also

```
Other Standard Plots: Plot.Area(), Plot.BarPlot3D(), Plot.Bar(), Plot.Box(), Plot.Copula3D(), Plot.Copula(), Plot.CorrMatrix(), Plot.Density(), Plot.HeatMap(), Plot.Histogram(), Plot.Line(), Plot.Pie(), Plot.River(), Plot.Scatter3D(), Plot.Scatter(), Plot.Step(), Plot.Violin()
```

Plot.StandardPlots

Plot.StandardPlots

Description

Helper for standard plots

```
Plot.StandardPlots(
  dt = NULL,
  PreAgg = FALSE,
  PlotType = "Scatter",
  SampleSize = 100000L,
  AggMethod = "mean",
  NumberBins = 30,
  YVar = NULL,
  XVar = NULL,
  ZVar = NULL,
  GroupVar = NULL,
  YVarTrans = NULL,
  XVarTrans = NULL,
  ZVarTrans = NULL,
  FacetRows = 1,
  FacetCols = 1,
  FacetLevels = NULL,
  Height = NULL,
  Width = NULL,
  PlotEngineType = "Plotly",
  EchartsTheme = "dark-blue",
  TimeLine = FALSE,
  Title = NULL,
  ShowLabels = FALSE,
  Title.YAxis = NULL,
  Title.XAxis = NULL,
  NumLevels_Y = 75,
  NumLevels_X = 40,
  BackGroundColor = "#6a6969",
  ChartColor = "#001534",
  FillColor = "#0066ff",
  FillColorReverse = "#97ff00",
```

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```
GridColor = "white",
TextColor = "white",
FontSize = 14,
Debug = FALSE
```

Arguments

dt source data.table

FALSE PreAgg PlotType character SampleSize character AggMethod character

NumberBins For histograms

YVar Y-Axis variable name XVar X-Axis variable name Z-Axis variable name ZVar

Character variable variable GroupVar

"Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-**YVarTrans**

ize", "BoxCox", "YeoJohnson"

"Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-**XVarTrans**

ize", "BoxCox", "YeoJohnson"

"Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-**ZVarTrans**

ize", "BoxCox", "YeoJohnson"

FacetRows Defaults to 1 which causes no faceting to occur vertically. Otherwise, supply a

numeric value for the number of output grid rows

FacetCols Defaults to 1 which causes no faceting to occur horizontally. Otherwise, supply

a numeric value for the number of output grid columns

FacetLevels Faceting rows x columns is the max number of levels allowed in a grid. If your

GroupVar has more you can supply the levels to display.

NULL or valid css unit Height Width NULL or valid css unit "Echarts" or "Plotly"

PlotEngineType

EchartsTheme "auritus", "azul", "bee-inspired", "blue", "caravan", "carp", "chalk", "cool", "dark-bold", "dark", "eduardo"

#" "essos", "forest", "fresh-cut", "fruit", "gray", "green", "halloween", "helianthus", "infographic", "inspire

#" "jazz", "london", "dark", "macarons", "macarons2", "mint", "purple-passion", "red-

velvet","red","roma","royal", #' "sakura", "shine", "tech-blue", "vintage", "walden", "wef", "weforum", "

TimeLine character Title character ShowLabels character Title.YAxis character Title.XAxis character

BackGroundColor

color outside of plot window. Rcolors and hex outside of plot window. Rcolors

and hex character

Plot.Step 69

```
ChartColor character
FillColor character
FillColorReverse character

GridColor character

TextColor character
FontSize numeric
Debug Debugging purposes
```

Author(s)

Adrian Antico

See Also

Other Auto Plotting: Plots.ModelEvaluation()

Plot.Step Plot.Step

Description

This function automatically builds calibration plots and calibration boxplots for model evaluation using regression, quantile regression, and binary and multinomial classification

```
Plot.Step(
  dt = NULL,
  AggMethod = "mean",
  PreAgg = TRUE,
  Engine = "Echarts",
  XVar = NULL,
  YVar = NULL,
  GroupVar = NULL,
  YVarTrans = "Identity",
  XVarTrans = "Identity",
  FacetRows = 1,
  FacetCols = 1,
  FacetLevels = NULL,
  Height = NULL,
  Width = NULL,
  Title = "Line Plot",
  ShowLabels = FALSE,
  Title.YAxis = NULL,
  Title.XAxis = NULL,
  EchartsTheme = "macarons",
  X_Scroll = FALSE,
  Y_Scroll = FALSE,
  TimeLine = TRUE,
```

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```
ShowSymbol = FALSE,
 BackGroundColor = "#6a6969",
 ChartColor = "#001534",
 FillColor = "#0066ff",
 FillColorReverse = "#97ff00",
 GridColor = "white",
 TextColor = "white",
  ZeroLineColor = "#ffff",
  ZeroLineWidth = 1.25,
  title.fontSize = 22,
  title.fontWeight = "bold",
  title.textShadowColor = "#63aeff",
  title.textShadowBlur = 3,
  title.textShadowOffsetY = 1,
  title.textShadowOffsetX = -1,
  xaxis.fontSize = 14,
 yaxis.fontSize = 14,
 Debug = FALSE
)
```

Arguments

dt source data.table

AggMethod character
PreAgg logical

Engine "Echarts" or "Plotly"

XVar X-Axis variable name

YVar Y-Axis variable name

GroupVar One Grouping Variable

YVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

XVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

FacetRows Defaults to 1 which causes no faceting to occur vertically. Otherwise, supply a

numeric value for the number of output grid rows

FacetCols Defaults to 1 which causes no faceting to occur horizontally. Otherwise, supply

a numeric value for the number of output grid columns

FacetLevels Faceting rows x columns is the max number of levels allowed in a grid. If your

GroupVar has more you can supply the levels to display.

Height = NULL,
Width = NULL,
Title "Title"
ShowLabels character
Title.YAxis character
Title.XAxis character

EchartsTheme Provide an "Echarts" theme

X_Scroll logical

Plot.Stock 71

 Y_Scroll logical TimeLine Logical ShowSymbol = FALSE

BackGroundColor

color outside of plot window. Rcolors and hex

ChartColor color FillColor color FillColorReverse

character

GridColor color

TextColor "Not Implemented"

ZeroLineColor color ZeroLineWidth 1

Debugging purposes

Author(s)

Adrian Antico

See Also

```
Other Standard Plots: Plot.Area(), Plot.BarPlot3D(), Plot.Bar(), Plot.Box(), Plot.Copula3D(), Plot.Copula(), Plot.CorrMatrix(), Plot.Density(), Plot.HeatMap(), Plot.Histogram(), Plot.Line(), Plot.Pie(), Plot.River(), Plot.Scatter3D(), Plot.Scatter(), Plot.StackedBar(), Plot.Violin()
```

Plot.Stock

Plot.Stock

Description

Create a candlestick plot for stocks. See https://plotly.com/r/figure-labels/

```
Plot.Stock(
   StockDataOutput,
   Type = "candlestick",
   Metric = "Stock Price",
   PlotEngineType = "Echarts",
   Width = NULL,
   Height = NULL,
   EchartsTheme = "macarons",
   TextColor = "white",
   ShadowBlur = 0,
   ShadowColor = "black",
   ShadowOffsetX = 0,
   ShadowOffsetY = 0,
   title.fontSize = 14,
```

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```
title.fontWeight = "bold",
      title.textShadowColor = "#63aeff",
      title.textShadowBlur = 3,
      title.textShadowOffsetY = 1,
      title.textShadowOffsetX = -1,
      Color = "green",
      Color0 = "red",
      BorderColor = "transparent",
      BorderColor0 = "transparent";
      BorderColorDoji = "transparent",
      xaxis.fontSize = 14,
      yaxis.fontSize = 14,
      Debug = FALSE
   )
Arguments
    StockDataOutput
                    PolyOut returned from StockData()
                    'candlestick', 'ohlc'
    Type
   PlotEngineType = "Echarts" or "Plotly"
   Width
                    = "1450px"
   Height
                    = "600px"
   EchartsTheme
                    = "macarons"
                    = "white"
    TextColor
    ShadowBlur
                    = 5. Chart boxes' shadow blur amount. This attribute should be used along with
                    shadowColor,shadowOffsetX, shadowOffsetY to set shadow to component
    ShadowColor
                    "black"
    ShadowOffsetX
                    0
    ShadowOffsetY
    title.fontSize = 22
    title.fontWeight
                    = "bold", # norma
    title.textShadowColor
                    = '#63aeff'
    title.textShadowBlur
    title.textShadowOffsetY
    title.textShadowOffsetX
    xaxis.fontSize = 14
   yaxis.fontSize = 14
Author(s)
    Adrian Antico
```

See Also

Other Stock Plots: StockData()

Plot.VariableImportance

Plot.VariableImportance

Description

Generate variable importance plots

```
Plot.VariableImportance(
  dt = NULL,
  XVar = NULL,
  YVar = NULL,
  GroupVar = NULL,
  YVarTrans = "Identity",
  XVarTrans = "Identity",
  FacetRows = 1,
  FacetCols = 1,
  FacetLevels = NULL,
  AggMethod = "mean",
  Height = NULL,
  Width = NULL,
  Title = "Variable Importance Plot",
  ShowLabels = FALSE,
  Title.YAxis = NULL,
  Title.XAxis = NULL,
  Engine = "Echarts",
  EchartsTheme = "macarons",
  TimeLine = TRUE,
  X_Scroll = TRUE,
  Y_Scroll = TRUE,
  BackGroundColor = "#6a6969",
  ChartColor = "#001534",
  FillColor = "#0066ff",
  FillColorReverse = "#97ff00",
  GridColor = "white",
  TextColor = "white",
  ZeroLineColor = "#ffff",
  ZeroLineWidth = 1.25,
  title.fontSize = 22,
  title.fontWeight = "bold",
  title.textShadowColor = "#63aeff",
  title.textShadowBlur = 3,
  title.textShadowOffsetY = 1,
  title.textShadowOffsetX = -1,
  xaxis.fontSize = 14,
  yaxis.fontSize = 14,
  Debug = FALSE
```

Arguments

dt source data.table

XVar Column name of X-Axis variable. If NULL then ignored YVar Column name of Y-Axis variable. If NULL then ignored

Column name of Group Variable for distinct colored histograms by group levels GroupVar

"Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-**YVarTrans**

ize", "BoxCox", "YeoJohnson"

"Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-**XVarTrans**

ize", "BoxCox", "YeoJohnson"

FacetRows Defaults to 1 which causes no faceting to occur vertically. Otherwise, supply a

numeric value for the number of output grid rows

FacetCols Defaults to 1 which causes no faceting to occur horizontally. Otherwise, supply

a numeric value for the number of output grid columns

FacetLevels Faceting rows x columns is the max number of levels allowed in a grid. If your

GroupVar has more you can supply the levels to display.

AggMethod Choose from 'mean', 'sum', 'sd', and 'median'

Title title

ShowLabels character Title.YAxis character Title.XAxis character

'Plotly' or "Echarts" Engine

EchartsTheme "auritus", "azul", "bee-inspired", "blue", "caravan", "carp", "chalk", "cool", "dark-bold", "dark", "eduardo"

#' "essos", "forest", "fresh-cut", "fruit", "gray", "green", "halloween", "helianthus", "infographic", "inspire "bazz", "london", "dark", "macarons", "macarons2", "mint", "purple-passion", "red-

velvet","red","roma","royal", #' "sakura","shine","tech-blue","vintage","walden","wef","weforum","

TimeLine logical logical X_Scroll Y_Scroll logical

BackGroundColor

color outside of plot window. Rcolors and hex outside of plot window. Rcolors

and hex character

ChartColor 'lightsteelblue'

FillColor 'gray' FillColorReverse

character hex

GridColor 'white' TextColor 'darkblue' = '#ffff' ZeroLineColor

Debug Debugging purposes

Author(s)

Adrian Antico

Plot. Violin 75

See Also

```
Other Model Evaluation: Plot.BinaryMetrics(), Plot.Calibration.Box(), Plot.Calibration.Line(), Plot.ConfusionMatrix(), Plot.Gains(), Plot.Lift(), Plot.PartialDependence.Box(), Plot.PartialDependence.Plot.PartialDependence.Line(), Plot.RoC(), Plot.Residuals.Histogram(), Plot.Residuals.Scatter(), Plot.ShapImportance()
```

Plot.Violin

Plot. Violin

Description

Build a violin plot by simply passing arguments to a single function. It will sample your data using SampleSize number of rows. Sampled data is randomized.

Usage

```
Plot.Violin(
  dt = NULL,
  XVar = NULL,
  YVar = NULL,
  GroupVar = NULL,
  YVarTrans = "Identity",
  XVarTrans = "Identity",
  FacetRows = 1,
  FacetCols = 1,
  FacetLevels = NULL,
  Height = NULL,
  Width = NULL,
  Title = "Violin Plot",
  SampleSize = 1e+05,
  BackGroundColor = "#6a6969",
  ChartColor = "#001534",
  FillColor = "#0066ff",
  FillColorReverse = "#97ff00",
  GridColor = "white"
  TextColor = "white",
  ZeroLineColor = "#ffff",
  ZeroLineWidth = 1.25,
  Debug = FALSE
)
```

Arguments

dt source data.table

XVar X-Axis variable name

YVar Y-Axis variable name

GroupVar Requires an XVar and YVar already be defined

YVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

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XVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

FacetRows Defaults to 1 which causes no faceting to occur vertically. Otherwise, supply a

numeric value for the number of output grid rows

FacetCols Defaults to 1 which causes no faceting to occur horizontally. Otherwise, supply

a numeric value for the number of output grid columns

FacetLevels Faceting rows x columns is the max number of levels allowed in a grid. If your

GroupVar has more you can supply the levels to display.

 $\begin{aligned} & \text{Height} & = \text{NULL}, \\ & \text{Width} & = \text{NULL}, \\ & \text{Title} & \text{'Violin Plot'} \end{aligned}$

SampleSize An integer for the number of rows to use. Sampled data is randomized. If NULL

then ignored

BackGroundColor

color outside of plot window. Rcolors and hex outside of plot window. Rcolors

and hex character

ChartColor 'lightsteelblue'

FillColor 'gray'

FillColorReverse

character

GridColor 'white'

TextColor 'darkblue'

ZeroLineColor = '#ffff',

 ${\sf ZeroLineWidth} \quad = 2,$

Debugging purposes

ShowLabels character
Title.YAxis character
Title.XAxis character

Author(s)

Adrian Antico

See Also

```
Other Standard Plots: Plot.Area(), Plot.BarPlot3D(), Plot.Bar(), Plot.Box(), Plot.Copula3D(), Plot.Copula(), Plot.CorrMatrix(), Plot.Density(), Plot.HeatMap(), Plot.Histogram(), Plot.Line(), Plot.Pie(), Plot.River(), Plot.Scatter3D(), Plot.Scatter(), Plot.StackedBar(), Plot.Step()
```

Plots.ModelEvaluation 77

Plots.ModelEvaluation Plots.ModelEvaluation

Description

Plot helper for model evaluation plot types

Usage

```
Plots.ModelEvaluation(
  dt = NULL,
  AggMethod = "mean",
  SampleSize = 100000L,
  PlotType = NULL,
  YVar = NULL,
  TargetLevel = NULL,
  ZVar = NULL,
  XVar = NULL,
  GroupVar = NULL,
  YVarTrans = "Identity",
  XVarTrans = "Identity",
  ZVarTrans = "Identity",
  FacetRows = 1,
  FacetCols = 1,
  FacetLevels = NULL,
  NumLevels_Y = 75,
  NumLevels_X = 40,
  Height = NULL,
  Width = NULL,
  Title = NULL,
  ShowLabels = FALSE,
  Title.YAxis = NULL,
  Title.XAxis = NULL,
  PlotEngineType = "Echarts",
  EchartsTheme = "dark-blue",
  TimeLine = FALSE,
  BackGroundColor = "#6a6969",
  ChartColor = "#001534",
  FillColor = "#0066ff",
  FillColorReverse = "#97ff00",
  GridColor = "white",
  TextColor = "white",
  FontSize = 14L,
  NumberBins = 20,
  Debug = FALSE
)
```

Arguments

```
dt source data.table
AggMethod character
```

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SampleSize 100000L PlotType character

YVar Y-Axis variable name
ZVar Z-Axis variable name
XVar X-Axis variable name
GroupVar Character variable

YVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

XVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

ZVarTrans "Asinh", "Log", "LogPlus1", "Sqrt", "Asin", "Logit", "PercRank", "Standard-

ize", "BoxCox", "YeoJohnson"

FacetRows Defaults to 1 which causes no faceting to occur vertically. Otherwise, supply a

numeric value for the number of output grid rows

FacetCols Defaults to 1 which causes no faceting to occur horizontally. Otherwise, supply

a numeric value for the number of output grid columns

FacetLevels Faceting rows x columns is the max number of levels allowed in a grid. If your

GroupVar has more you can supply the levels to display.

 $\label{eq:NumLevels_Y} \begin{array}{ll} \text{NumLevels_Y} & = 75 \\ \text{NumLevels_X} & = 40 \\ \text{Height} & = \text{NULL}, \\ \text{Width} & = \text{NULL}, \end{array}$

PlotEngineType "Echarts" or "Plotly"

EchartsTheme "auritus", "azul", "bee-inspired", "blue", "caravan", "carp", "cha

"auritus", "azul", "bee-inspired", "blue", "caravan", "carp", "chalk", "cool", "dark-bold", "dark", "eduardo" #' "essos", "forest", "fresh-cut", "fruit", "gray", "green", "halloween", "helianthus", "infographic", "inspire

#' "jazz", "london", "dark", "macarons", "macarons2", "mint", "purple-passion", "red-

velvet", "red", "roma", "royal", #' "sakura", "shine", "tech-blue", "vintage", "walden", "wef", "weforum", "

TimeLine logical

BackGroundColor

color outside of plot window. Rcolors and hex outside of plot window. Rcolors

and hex character

ChartColor hex
FillColor hex
FillColorReverse hex

GridColor hex
TextColor hex
NumberBins numeric

Debugging purposes

Author(s)

Adrian Antico

See Also

Other Auto Plotting: Plot.StandardPlots()

StockData 79

StockData StockData

Description

Create stock data for plotting using Plot.Stock()

Usage

```
StockData(
  PolyOut = NULL,
  Symbol = "TSLA",
  CompanyName = "Tesla Inc. Common Stock",
  Metric = "Stock Price",
  TimeAgg = "days",
  StartDate = "2022-01-01",
  EndDate = Sys.Date(),
  APIKey = NULL,
  timeElapsed = 61,
  Debug = FALSE
)
```

Arguments

PolyOut NULL. If NULL, data is pulled. If supplied, data is not pulled.

Symbol ticker symbol string

CompanyName company name if you have it. ends up in title, that is all

Metric Stock Price, Percent Returns (use symbol for percent), Percent Log Returns (use

symbol for percent), Index, Quadratic Variation

TimeAgg = 'days', 'weeks', 'months'

StartDate Supply a start date. E.g. '2022-01-01' EndDate Supply an end date. E.g. 'Sys.Date()'

APIKey Supply your polygon API key

timeElapsed = 60

Type 'candlestick', 'ohlc'

Author(s)

Adrian Antico

See Also

```
Other Stock Plots: Plot.Stock()
```

80 UpdateDocs

UpdateDocs

UpdateDocs

Description

Update helf files and reference manual

Usage

```
UpdateDocs(BuildVignette = FALSE, Root = NULL)
```

Author(s)

Adrian Antico

See Also

Other Utilities: BuildBinary(), Install()

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