0.1 `rocplot`: Receiver Operator Characteristic Plots

Description

The `rocplot` command generates a receiver operator characteristic plot to compare the in-sample (default) or out-of-sample fit for two logit or probit regressions.

Usage

```
rocplot(y1, y2, fitted1, fitted2, cutoff = seq(from=0, to=1, length=100),
        lty1 = "solid", lty2 = "dashed", lwd1 = par("lwd"), lwd2 = par("lwd"),
        col1 = par("col"), col2 = par("col"), main, xlab, ylab,
        plot = TRUE, ...)
```

Arguments

`y1`	Response variable for the first model.
`y2`	Response variable for the second model.
`fitted1`	Fitted values for the first model. These values may represent either the in-sample or out-of-sample fitted values.
`fitted2`	Fitted values for the second model.
`cutoff`	A vector of cut-off values between 0 and 1, at which to evaluate the proportion of 0s and 1s correctly predicted by the first and second model. By default, this is 100 increments between 0 and 1, inclusive.
`lty1, lty2`	The line type for the first model (`lty1`) and the second model (`lty2`), defaulting to solid and dashed, respectively.
`lwd1, lwd2`	The width of the line for the first model (`lwd1`) and the second model (`lwd2`), defaulting to 1 for both.
`col1, col2`	The colors of the line for the first model (`col1`) and the second model (`col2`), defaulting to black for both.
`main`	a title for the plot. Defaults to `ROC Curve`.
`xlab`	a label for the x-axis. Defaults to `Proportion of 1's Correctly Predicted`.
`ylab`	a label for the y-axis. Defaults to `Proportion of 0's Correctly Predicted`.
`plot`	defaults to `TRUE`, which generates a plot to the selected device. If `FALSE`, returns a list of items (see below).
`...`	Additional parameters passed to plot, including `xlab`, `ylab`, and `main`.

Value

If `plot = TRUE`, `rocplot` generates an ROC plot for two logit or probit models. If `plot = FALSE`, `rocplot` returns a list with the following elements:

`roc1`	a matrix containing a vector of x-coordinates and y-coordinates corresponding to the number of ones and zeros correctly predicted for the first model.
`roc2`	a matrix containing a vector of x-coordinates and y-coordinates corresponding to the number of ones and zeros correctly predicted for the second model.
`area1`	the area under the first ROC curve, calculated using Reimann sums.
`area2`	the area under the second ROC curve, calculated using Reimann sums.

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See Also

The full Zelig manual (available at `http://gking.harvard.edu/zelig`), `plot`, `lines`.

Examples

```
data(turnout)
z.out1 <- zelig(vote ~ race + educate + age, model = "logit",
  data = turnout)
z.out2 <- zelig(vote ~ race + educate, model = "logit",
  data = turnout)
rocplot(z.out1$y, z.out2$y, fitted(z.out1), fitted(z.out2))
```