

Package ‘affylmGUI’

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Title GUI for limma package with Affymetrix microarrays

Author James Wettenhall [cre,aut], Ken Simpson [aut], Gordon Smyth [aut], Keith Satterley [ctb], Yifang Hu [ctb]

Maintainer Yifang Hu <hu@wehi.edu.au>, Gordon Smyth <smyth@wehi.edu.au>, Keith Satterley <keith@wehi.edu.au>

Imports grDevices, graphics, stats, utils, tcltk, tkrplot, limma, affy, affyio, affyPLM, gcrma, BiocGenerics, BiocInstaller, R2HTML, xtable

Description A Graphical User Interface for analysis of Affymetrix microarray gene expression data using the affy and limma packages.

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URL <http://bioinf.wehi.edu.au/affylmGUI/>

biocViews GUI, GeneExpression, Transcription, DifferentialExpression, DataImport, Bayesian, Regression, TimeCourse, Microarray, mRNAArray, OneChannel, ProprietaryPlatforms, BatchEffect, MultipleComparison, Normalization, Preprocessing, QualityControl

NeedsCompilation no

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affylmGUI *Graphical User Interface for the limma microarray package*

Description

Graphical User Interface for Affy analysis using the limma microarray package

Usage

```
AboutaffyIbmGUI()
affyHelp()
affyIbmGUI(BigfontsForaffyIbmGUIpresentation=FALSE)
affyIbmGUIhelp()
affyPlotMA()
affyPlotMAcontrast()
ALGlimmaUsersGuide(view=TRUE)
ChooseCDF()
ChooseContrastParameterization()
chooseDir()
ChooseEbayesStatistic()
ComputeContrasts()
ComputeLinearModelFit()
CopyGraph(img)
DeleteContrastParameterization()
deleteItemFromList(list1,itemName=NULL,index=NULL)
DensityPlot()
DensityPlotAll()
evalRcode()
ExportHTMLreport()
ExportNormalizedExpressionValues()
ExportTopTable()
fixSeps(string)
generalPlotFunction(code="",WindowTitle="")
GetComponentstoExportInHTMLreport(contrastParameterizationIndex=NULL)
GetContrast(contrastParameterizationIndex)
GetContrastNamesForHeatDiagram(numContrasts=2,ContrastNames=c("Contrast 1","Contrast 2"))
GetContrastParameterizationName()
GetContrasts(NumContrasts=0)
GetDEcutoff()
GetGeneLabelsOptions()
GetJpegOrPngParams(graphFileType)
GetJpegOrPngX11Params(graphFileType)
GetlimmaDataSetName()
GetLogPLMDataChoice()
GetMultipleContrasts(contrastParameterizationIndex)
GetNormalizationMethod()
getPackageVersion(pkgName)
GetParameterizationName()
GetPlotLabels(plottitle="",xlabel="",ylabel="")
GetPlotSize()
GetPlotTitle(plottitle="")
GetPValueCutoff(p.value=0.01)
GetResidualTypeChoice()
GetRNATypesFrom.ContrastsFromDropDowns.String(string)
GetSetNames(numSets=2,set1="",set2="",set3="")
GetSlideNum(all=FALSE)
GetSlideNums()
GetWhichProbes(includeBoth=FALSE)
GetWtAreaParams()
GetWtFlagParams()
```

```
HeatDiagramDialog(parameterName)
HeatDiagramPlot()
HTMLplotUsingFunction(Caption = "", File = .HTML.file, GraphRelativeDirectory = ".", GraphAbsoluteDirectory = ".")
ImageArrayPlot()
ImageQualityResidualPlot()
ImageQualityWeightPlot()
initGlobals()
IntensityHistogram()
IntensityHistogramAll()
limmaHelp()
LogOddsPlot()
NewLimmaFile()
NormalizedIntensityBoxPlot()
NormalizeNow()
nstrstr(haystack,needle)
NUSEPlotAll()
onDestroy()
onExit()
OpenALimmaFile(FileName)
OpenCDFandTargetsfiles()
OpenCDFFile()
OpenLimmaFile()
OpenTargetsFile()
PlotOptions()
QQTplot()
RawIntensityBoxPlot()
Require(pkg)
Resize(img,plotFunction)
RLEPlotAll()
RNADegradationPlotAll()
SaveAsLimmaFile()
SaveGraphAsJpeg(initialfile, plotFunction)
SaveGraphAsPDF(initialfile, plotFunction)
SaveGraphAsPNG(initialfile, plotFunction)
SaveGraphAsPostscript(initialfile, plotFunction)
SaveLimmaFile()
SetupPlotKeyBindings(tt,img)
SetupPlotMenus(tt,initialfile,plotFunction,img)
SetWD()
showChangeLog(n = 20)
showCitations()
showTopTable(...,export=FALSE)
SimplifyContrastsExpression(string)
strstr(haystack, needle)
tclArrayVar()
TclRequire(tclPkg)
topTable2(fit, coef = 1, number = 10, genelist = NULL, adjust.method = "holm", sort.by = "B")
toptable2(fit, coef = 1, number = 10, genelist = NULL, A = NULL, eb = NULL, adjust.method = "holm", s
Try(expr)
TryReadImgProcFile(expr)
UpDownOrBoth()
vennDiagramaffyImGUI(object, include = "both", names, cex = 1.5, mar = rep(1, 4), ...)
```

```

VennDiagramPlot()
ViewContrastsMatrixAsPairs(contrastsMatrix, contrastsMatrixList, contrastParameterizationIndex = 1)
ViewContrastsMatrixInTable(contrastsMatrixList, contrastParameterizationIndex = NULL)
ViewExistingContrastParameterization()
ViewRNATargets()

```

Arguments

```

BigfontsForaffyImGUIpresentation
    affyImGUI:arg1: If set to TRUE, larger fonts are used. However, some font sizes
    are not controlled by affyImGUI and so must be adjusted in the operating sys-
    tem, e.g. in the Control Panel in Windows under Display, Appearance.
...
HTMLplotUsingFunction:arg14:and:showTopTable:arg1:and:toptable2:arg9:and:vennDiagramaffyImGUI
Align
    HTMLplotUsingFunction:arg8
all
    GetSlideNum:arg1
BG
    HTMLplotUsingFunction:arg12
Caption
    HTMLplotUsingFunction:arg1
code
    generalPlotFunction: arg1: a code
ContrastNames
    GetContrastNamesForHeatDiagram:arg2
contrastParameterizationIndex
    GetComponentsToExportInHTMLreport:arg1:and:contrastParameterizationIndex:arg1:and:GetContrastNames:arg1
export
    showTopTable:arg2
expr
    Try:arg1:and:TryReadImgProcFile:arg1
File
    HTMLplotUsingFunction:arg2
FileName
    OpenALimmaFile:arg1
GraphAbsoluteDirectory
    HTMLplotUsingFunction:arg4
GraphBorder
    HTMLplotUsingFunction:arg7
GraphFileName
    HTMLplotUsingFunction:arg5
graphFileType
    GetJpegOrPngParams:arg1:and:GetJpegOrPngX11Params:arg1
GraphRelativeDirectory
    HTMLplotUsingFunction:arg3
GraphSaveAs
    HTMLplotUsingFunction:arg6
haystack
    nstrstr:arg1:and:strstr:arg1
Height
    HTMLplotUsingFunction:arg11
img
    Resize:arg1:and:SetupPlotMenus:arg4:and:CopyGraph:arg1:and:SetupPlotKeyBindings:arg2
includeBoth
    GetWhichProbes:arg1
index
    deleteItemFromList:arg3:an index
initialfile
    SetupPlotMenus:arg2:and:SaveGraphAsJpeg:arg1:and:SaveGraphAsPDF:arg1:and:SaveGraphAsPNG:arg1
itemName
    deleteItemFromList:arg2:an item name
list1
    deleteItemFromList:arg1:a list
needle
    nstrstr:arg2:and:strstr:arg2
NumContrasts
    GetContrasts:arg1
numContrasts
    GetContrastNamesForHeatDiagram:arg1

```

numSets	GetSetNames:arg1
p.value	GetPValueCutoff:arg1:A p-value cutoff.
parameterName	HeatDiagramDialog:arg1
pkgName	getPackageVersion:arg1
pkg	Require:arg1
plotFunction	Resize:arg2:and:HTMLplotUsingFunction:arg9:and:SetupPlotMenus:arg3:and:SaveGraphAsJpeg:ar
plottitle	GetPlotLabels:arg1:and:GetPlotTitle:arg1
res	HTMLplotUsingFunction:arg13
set1	GetSetNames:arg2
set2	GetSetNames:arg3
set3	GetSetNames:arg4
string	fixSeps:arg1:A character string:and:GetRNATypesFrom.ContrastsFromDropDowns.String:arg1:and:
tclPkg	TclRequire:arg1
tt	SetupPlotMenus:arg1:and:SetupPlotKeyBindings:arg1
view	ALGlimmaUsersGuide:arg1:A boolean determinig if the users'd guide will be viewed
Width	HTMLplotUsingFunction:arg10
WindowTitle	generalPlotFunction: arg2: a title
xlabel	GetPlotLabels:arg2
ylabel	GetPlotLabels:arg3
fit	topTable2:arg1:and:toptable2:arg1
coef	topTable2:arg2:and:toptable2:arg2
number	topTable2:arg3:and:toptable2:arg3
genelist	topTable2:arg4:and:toptable2:arg4
A	toptable2:arg5
eb	toptable2:arg6
adjust.method	topTable2:arg5:and:toptable2:arg7
sort.by	topTable2:arg6:and:toptable2:arg8
object	vennDiagramaffyImGUI:arg1
include	vennDiagramaffyImGUI:arg2
names	vennDiagramaffyImGUI:arg3
cex	vennDiagramaffyImGUI:arg4
mar	vennDiagramaffyImGUI:arg5
contrastsMatrix	ViewContrastsMatrixAsPairs:arg1
contrastsMatrixList	ViewContrastsMatrixAsPairs:arg2:and:ViewContrastsMatrixInTable:arg1
n	showChangeLog:arg1
PointSize	HTMLplotUsingFunction:arg12

Details

This function launches a Graphical User Interface for the limma package by Gordon Smyth. The GUI uses Tk widgets (via the R TclTk interface by Peter Dalgaard) in order to provide a simple interface to the limma functions for linear modelling of microarrays and identification of differentially expressed genes.

Author(s)

James Wettenhall

ALGchangeLog

affylmGUI Change Log

Description

Write as text the most recent changes from the affylmGUI package changelog.

Usage

```
ALGchangeLog(n=20)
```

Arguments

n integer, number of lines to write of changelog.

Value

No value is produced, but a number of lines of text are written to standard output.

Author(s)

Gordon Smyth

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