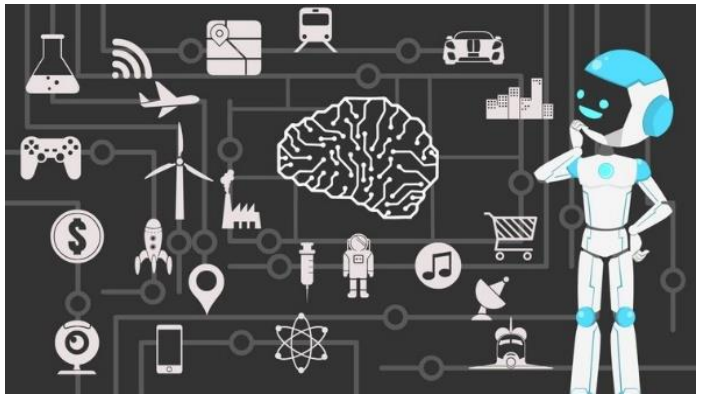


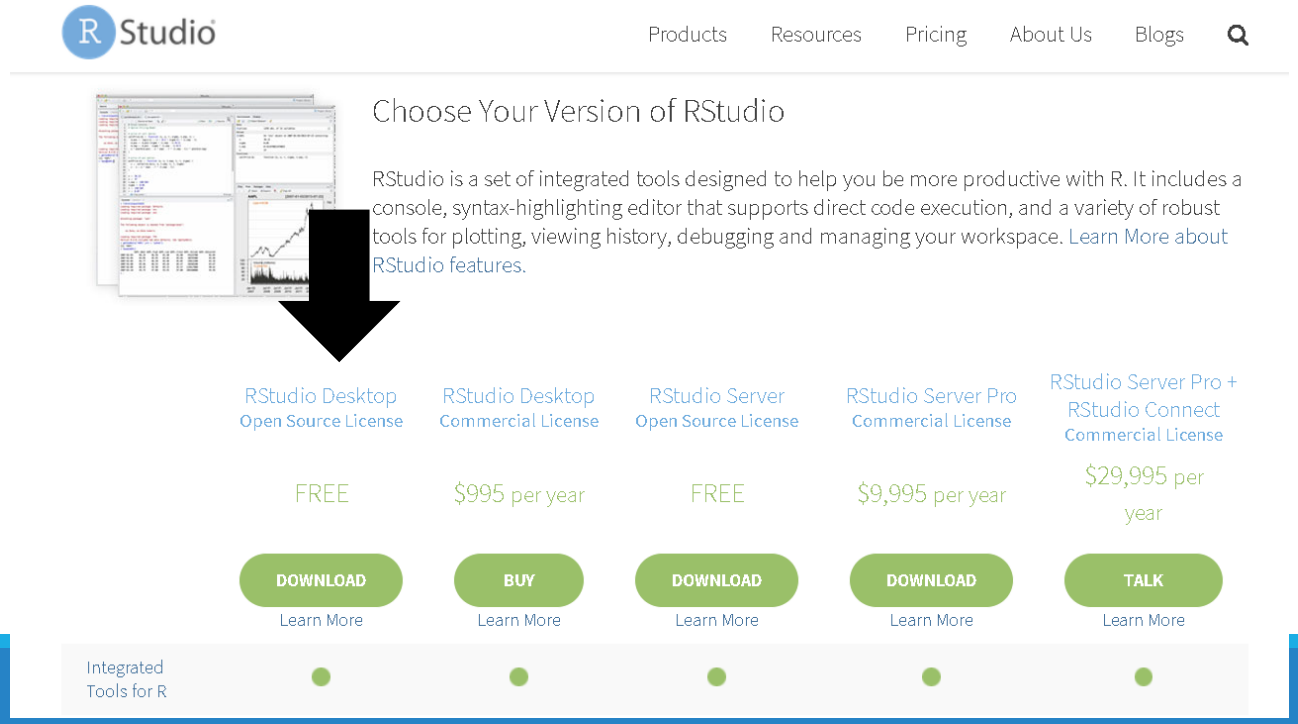
FORMAÇÃO INTELIGÊNCIA ARTIFICIAL E MACHINE LEARNING

CURSO DE R

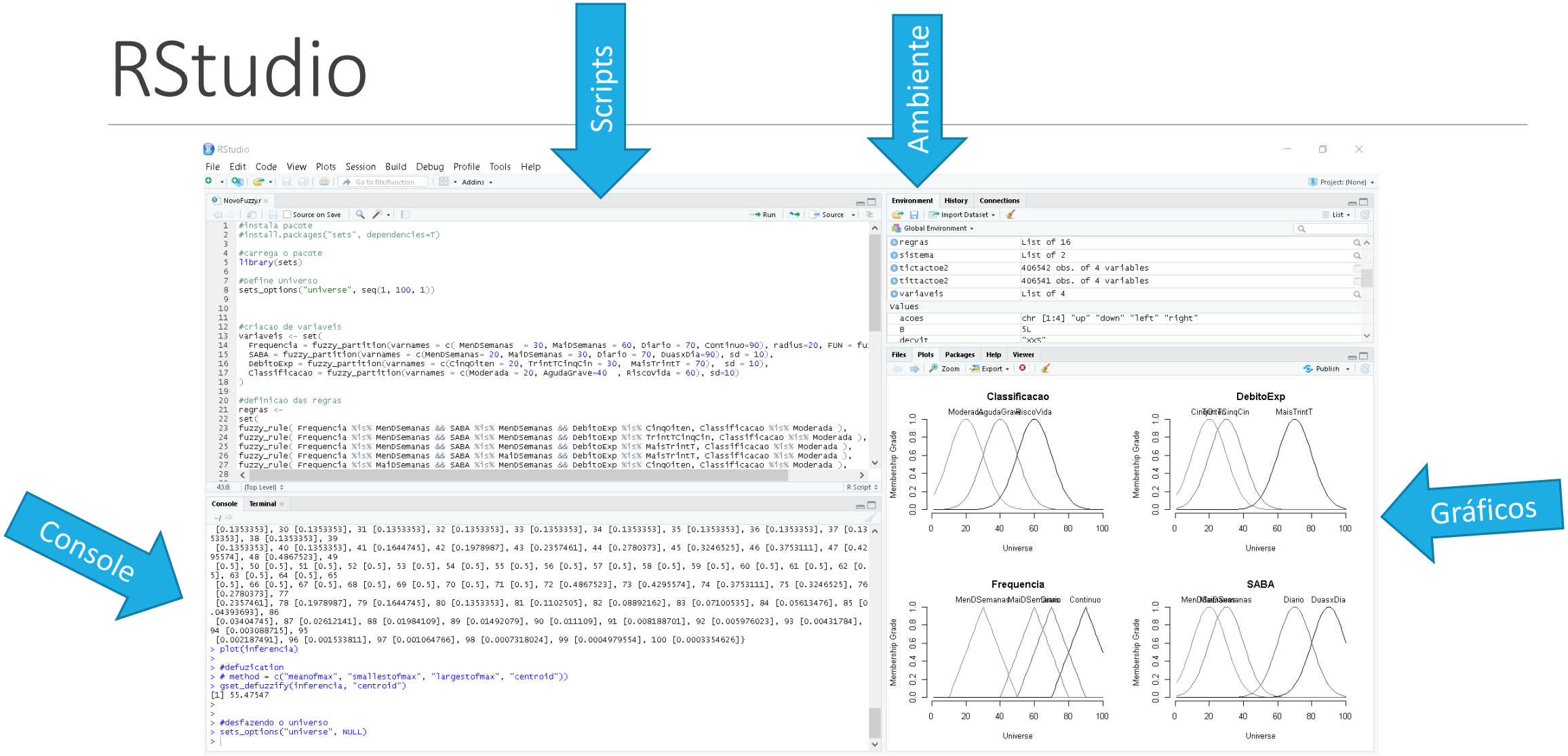
RSTUDIO

RStudio

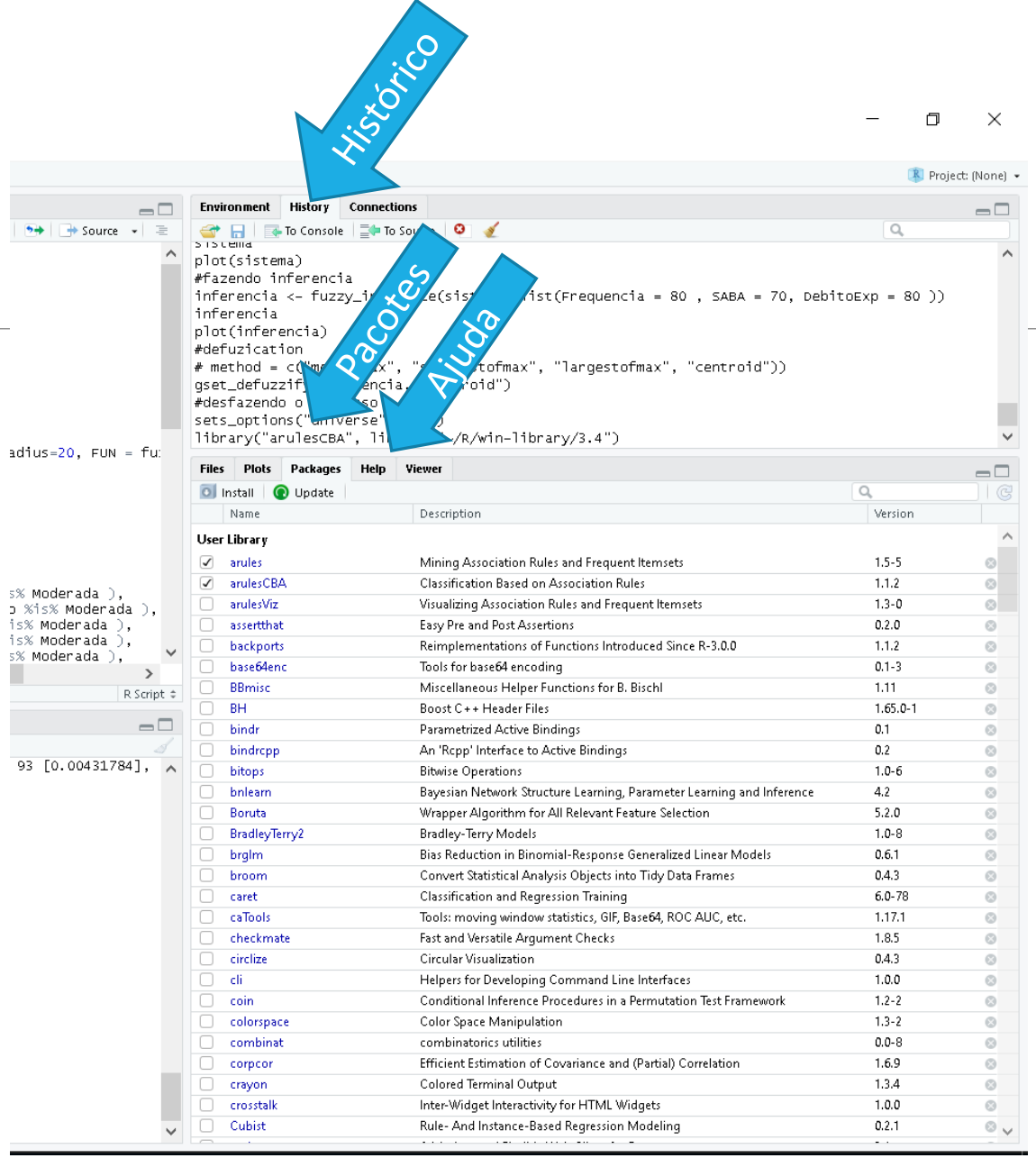
- Você precisa instalar o R: https://cran.r-project.org/mirrors.html
- Baixar e instalar em https://www.rstudio.com/products/rstudio/download/



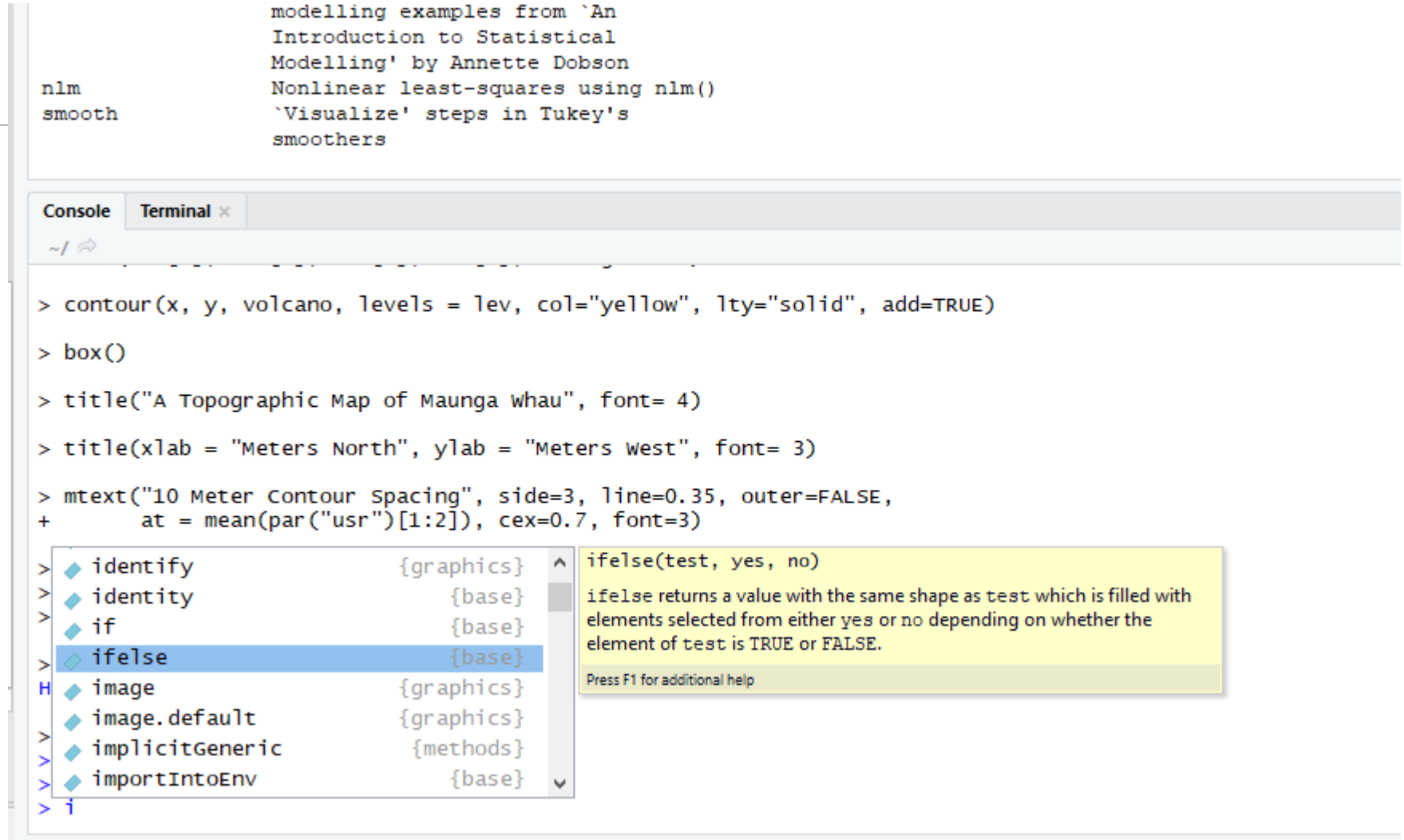
RStudio


Scripts
Ambiente
Console
Gráficos
RStudio
File Edit Code View Plots Session Build Debug Profile Tools Help
NovoFuzzy.r
#instala pacote
#install.packages("sets", dependencies=T)
#carrega o pacote
library(sets)
#Define Universo
sets_options("universe", seq(1, 100, 1))
#criacao de variaveis
variaveis <- set(
Frequencia = fuzzy_partition(varnames = c(MenDSemanas = 30, MaiDSemanas = 60, Diario = 70, Continuo=90), radius=20, FUN = fu
SABA = fuzzy_partition(varnames = c(MenDSemanas= 20, MaiDSemanas = 30, Diario = 70, DuasxDia=90), sd = 10),
DebitoExp = fuzzy_partition(varnames = c(CinqOiten = 20, TrinttCinqCin = 30, MaisTrintT = 70), sd = 10),
Classificacao = fuzzy_partition(varnames = c(Moderada = 20, AgudaGrave=40 , RiscoVida = 60), sd=10)
)
#definicao das regras
regras <-
set(
fuzzy_rule(Frequencia %is% MenDSemanas && SABA %is% MenDSemanas && DebitoExp %is% CinqOiten, Classificacao %is% Moderada),
fuzzy_rule(Frequencia %is% MenDSemanas && SABA %is% MenDSemanas && DebitoExp %is% TrinttCinqCin, Classificacao %is% Moderada),
fuzzy_rule(Frequencia %is% MenDSemanas && SABA %is% MenDSemanas && DebitoExp %is% MaisTrintT, Classificacao %is% Moderada),
fuzzy_rule(Frequencia %is% MenDSemanas && SABA %is% MaiDSemanas && DebitoExp %is% MaisTrintT, Classificacao %is% Moderada),
fuzzy_rule(Frequencia %is% MaiDSemanas && SABA %is% MenDSemanas && DebitoExp %is% CinqOiten, Classificacao %is% Moderada),
Console Terminal
[0.1353353], 30 [0.1353353], 31 [0.1353353], 32 [0.1353353], 33 [0.1353353], 34 [0.1353353], 35 [0.1353353], 36 [0.1353353], 37 [0.13
53353], 38 [0.1353353], 39
[0.1353353], 40 [0.1353353], 41 [0.1644745], 42 [0.1978987], 43 [0.2357461], 44 [0.2780373], 45 [0.3246525], 46 [0.3753111], 47 [0.42
95574], 48 [0.4867523], 49
[0.5], 50 [0.5], 51 [0.5], 52 [0.5], 53 [0.5], 54 [0.5], 55 [0.5], 56 [0.5], 57 [0.5], 58 [0.5], 59 [0.5], 60 [0.5], 61 [0.5], 62 [0.
5], 63 [0.5], 64 [0.5], 65
[0.5], 66 [0.5], 67 [0.5], 68 [0.5], 69 [0.5], 70 [0.5], 71 [0.5], 72 [0.4867523], 73 [0.4295574], 74 [0.3753111], 75 [0.3246525], 76
[0.2780373], 77
[0.2357461], 78 [0.1978987], 79 [0.1644745], 80 [0.1353353], 81 [0.1102505], 82 [0.08892162], 83 [0.07100535], 84 [0.05613476], 85 [0
.04393693], 86
[0.03404745], 87 [0.02612141], 88 [0.01984109], 89 [0.01492079], 90 [0.011109], 91 [0.008188701], 92 [0.005976023], 93 [0.00431784],
94 [0.003088715], 95
[0.002187491], 96 [0.001533811], 97 [0.001064766], 98 [0.0007318024], 99 [0.0004979554], 100 [0.0003354626]}
> plot(inferencia)
> #defuzication
> # method = c("meanofmax", "smallestofmax", "largestofmax", "centroid"))
> gset_defuzzify(inferencia, "centroid")
[1] 55.47547
> #desfazendo o universo
> sets_options("universe", NULL)
Environment History Connections
Global Environment
regras List of 16
sistema List of 2
tictactoe2 406542 obs. of 4 variables
tittactoe2 406541 obs. of 4 variables
variaveis List of 4
values
acoes chr [1:4] "up" "down" "left" "right"
B 5L
Files Plots Packages Help Viewer
Zoom Export Publish
Classificacao
Moderada AgudaGrave RiscoVida
DebitoExp
CinqOiten TrinttCinqCin MaisTrintT
Frequencia
MenDSemanas MaiDSemanas Diario Continuo
SABA
MenDSemanas Diario DuasxDia
Membership Grade
Universe

RStudio


Histórico
Pacotes
Ajuda
Project: (None)
Environment
History
Connections
Source
To Console
plot(sistema)
#fazendo inferencia
inferencia
plot(inferencia)
#defuzication
#desfazendo o
sets_options("universe"
Files
Plots
Packages
Help
Viewer
Install
Update
Name
Description
Version
User Library
arules
Mining Association Rules and Frequent Itemsets
1.5-5
arulesCBA
Classification Based on Association Rules
1.1.2
arulesViz
Visualizing Association Rules and Frequent Itemsets
1.3-0
assertthat
Easy Pre and Post Assertions
0.2.0
backports
Reimplementations of Functions Introduced Since R-3.0.0
1.1.2
base64enc
Tools for base64 encoding
0.1-3
BBmisc
Miscellaneous Helper Functions for B. Bischl
1.11
BH
Boost C++ Header Files
1.65.0-1
bindr
Parametrized Active Bindings
0.1
bindrcpp
An 'Rcpp' Interface to Active Bindings
0.2
bitops
Bitwise Operations
1.0-6
bnlearn
Bayesian Network Structure Learning, Parameter Learning and Inference
4.2
Boruta
Wrapper Algorithm for All Relevant Feature Selection
5.2.0
BradleyTerry2
Bradley-Terry Models
1.0-8
brglm
Bias Reduction in Binomial-Response Generalized Linear Models
0.6.1
broom
Convert Statistical Analysis Objects into Tidy Data Frames
0.4.3
caret
Classification and Regression Training
6.0-78
caTools
Tools: moving window statistics, GIF, Base64, ROC AUC, etc.
1.17.1
checkmate
Fast and Versatile Argument Checks
1.8.5
circlize
Circular Visualization
0.4.3
cli
Helpers for Developing Command Line Interfaces
1.0.0
coin
Conditional Inference Procedures in a Permutation Test Framework
1.2-2
colorspace
Color Space Manipulation
1.3-2
combinat
combinatorics utilities
0.0-8
corpcor
Efficient Estimation of Covariance and (Partial) Correlation
1.6.9
crayon
Colored Terminal Output
1.3.4
crosstalk
Inter-Widget Interactivity for HTML Widgets
1.0.0
Cubist
Rule- And Instance-Based Regression Modeling
0.2.1
R Script

RStudio


modelling examples from `An
Introduction to Statistical
Modelling' by Annette Dobson
nlm Nonlinear least-squares using nlm()
smooth `Visualize' steps in Tukey's
smoothers
Console
Terminal
~/
> contour(x, y, volcano, levels = lev, col="yellow", lty="solid", add=TRUE)
> box()
> title("A Topographic Map of Maunga Whau", font= 4)
> title(xlab = "Meters North", ylab = "Meters West", font= 3)
> mtext("10 Meter Contour Spacing", side=3, line=0.35, outer=FALSE,
+ at = mean(par("usr")[1:2]), cex=0.7, font=3)
identify {graphics}
identity {base}
if {base}
ifelse {base}
image {graphics}
image.default {graphics}
implicitGeneric {methods}
importIntoEnv {base}
> i
ifelse(test, yes, no)
ifelse returns a value with the same shape as test which is filled with elements selected from either yes or no depending on whether the element of test is TRUE or FALSE.
Press F1 for additional help