

6.7.3 JGR Java GUI for R

The Java GUI for R, JGR (pronounced "jaguar") is very similar to R's own simple interface, making it very easy to learn [15]. It adds some helpful tools, like syntax checking in its program editor. It also provides the help files in a way that lets you execute any part of an example you select. That is very helpful when trying to understand a complicated example.

	Settings Help		Rattle Version 2.3.65 togaware.co
Execute New		⊲ e port Quit	
Data Explore Transf	orm Cluster Associate	e Model Evaluate Log	
# Rattle timestamp: # BOX PLOT	2008-08-04 10:34:09		
# Generate just the c	lata for a boxplot of q	1.	
data.frame(d		[,"q1"], grp="All"), \$dataset\$gender=="f","q \$dataset\$gender=="m","	
	ned annronriately		
# Plot the data, grou	ped appropriately.		
# Plot the data, grou bp <- boxplot(dat ~ (3), xlab="gender", notch:	=TRUE)

Fig. 6.7 An R program written by RATTLE based upon a menu selection to do a boxplot

To install it on Microsoft Windows or Apple Macintosh, you must download and run its installer from its website http://rosuda.org/JGR/ [16]. Linux users have some additional minor steps that are described at the site.

In Fig. 6.8, the JGR program editor has automatically color-coded my comments, function names, and arguments, making it much easier to spot errors.

In this next example (Fig. 6.9), when I typed "cor(" it offered a box showing the various arguments that control the cor function for doing correlations. That is very helpful when you are learning!

JGR's package manager makes it easier to control which packages you are using (Fig. 6.10). Simply checking the boxes under "loaded" will load those packages from the library. If you also check it under "default" JGR will load them every time you start JGR. Without JGR's help, that feature would require editing your .Rprofile.

JGR's object browser makes it easy to manage your workspace (Fig. 6.11). Selecting different tabs across the top enable you to see the different types of objects in your workspace. Below I right clicked on gender, this brought up the box listing the number of males, females, and missing values (NAs). If you have a list of models, you can sort them easily by various measures, like their R-squared value.

Double-clicking on a data frame in the object browser starts a data editor (Fig. 6.12), which is much nicer than the one built into R. It lets you rename variables, search for values, sort by clicking on variable names, cut and paste values and add or delete rows or columns.

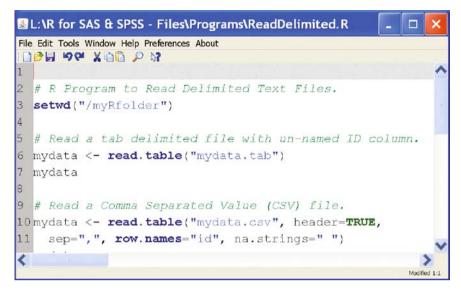


Fig. 6.8 Color-coded editor in JGR helps prevent typing errors

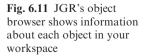
4	Console							-	
File Edit Tools Packages Workspace Window Help Preferences About									
			9 :	× D	2				
>	mydata <-	- read.t	tab	le('	"my	data.	tab")		^
>	mydata								
	workshop	gender	q1	q2	q3	q4			
1	1	f	1	1	5	1			
2	2	f	2	1	4	1			
3	1	f	2	2	4	3			
4	2	<na></na>	3	1	NA	3			
5	1	m	4	5	2	4			
6	2	m	5	4	5	5			
7	1	m	5	3	4	4			
8	2	m	4	5	5	5			~
co	r/								~
20	cor (x, y	= NULL, use =		L.obs'	', met	hod = c("pearson	",	
	"kendal	ll", "spearma	an"))						V

Fig. 6.9 JGR showing arguments that you might choose for the cor function

Wind	ow		
	defa	Package ggplot2 gpclib gplots graph graphics grDevices grid gridBase gtools gWidgets gWidgetsRGtk2 Hmisc iplots its JavaGD JGR kernlab KernSmooth	Description An implementation of the G General Polygon Clipping Li Various R programming too graph: A package to handle The R Graphics Package The R Graphics Devices and The Grid Graphics Package Integration of base and grid Various R programming tools gWidgets API for building to Toolkit implementation of g Harrell Miscellaneous iPlots - interactive graphics Irregular Time Series Java Graphics Device JGR - Java Gui for R Kernel Methods Lab Functions for kernel smooth

Fig. $6.10\,$ JGR's package manager which allows you to load packages from the library on demand and/or at startup

🛃 Object Browser	
Window	
Data Objects Models Other Objects	Functions
<pre>data mydata (data.frame workshop (factor</pre>) levels: 4
←● q2 (numeric) ←● q3 (numeric) ←● q4 (numeric)	f m 4 4
Save Data	Refresh Close



	workshop	gender	q1	q2	q3	q4
1	R	f	1.0	1.0	5.0	1.0
2	SAS	f	2.0	1.0	4.0	1.0
3	R	f	2.0	2.0	4.0	3.0
4	SAS	NA	3.0	1.0	NA	3.0
5	R	m	4.0	5.0	2.0	4.0
6	SAS	m	5.0	4.0	5.0	5.0
7	R	m	5.0	3.0	4.0	4.0
8	SAS	m	4.0	5.0	5.0	5.0

Fig. 6.12 JGR's data editor, an improvement over R's primitive one