How to save a plot as image on the disk?

I plot a simple linear regression using R. I would like to save that image as PNG or JPEG, is it possible to do it automatically? (via code)

There are two different questions: First, I am already looking at the plot on my monitor and I would like to save it as is. Second, I have not yet generated the plot, but I would like to directly save it to disk when I execute my plotting code.

r plot ggplot2 lattice r-faq

edited Sep 2 '14 at 8:29

Aaron McDaid
14.7k 4 37 63

asked Aug 22 '11 at 7:06

blakc05
959 3 8 6

Perhaps this question should be edited to ask about two distinct scenarios: First, you might be working interactively and have created a nice plot which you wish to save. Or, second, you haven't seen any plot yet and you want to write it directly to disk without looking at it first - this would make sense if you were writing a script to generate many plots for you. I will edit it now – Aaron McDaid Sep 2 '14 at 8:22

9 Answers

There are two closely-related questions, and an answer for each.

1. An image will be generated in future in my script, how do I save it to disk?

To save a plot, you need to do the following:

1. Open a device, using `png()`, `bmp()`, `pdf()` or similar
2. Plot your model
3. Close the device using `dev.off()`

Some example code for saving the plot to a `png` file:

```
fit <- lm(some ~ model)

png(filename="your/file/location/name.png")
plot(fit)
dev.off()
```

This is described in the (combined) help page for the graphical formats `?png`, `?bmp`, `?jpeg` and `?tiff` as well as in the separate help page for `?pdf`.

Note however that the image might look different on disk to the same plot directly plotted to your screen, for example if you have resized the on-screen window.

Note that if your plot is made by either `lattice` or `ggplot2` you have to explicitly print the plot. See this answer that explains this in more detail and also links to the R FAQ: ggplot's qplot does not execute on sourcing

2. I'm currently looking at a plot on my screen and I want to copy it 'as-is' to disk.

```
dev.print(pdf, 'filename.pdf')
```

This should copy the image perfectly, respecting any resizing you have done to the interactive window. You can, as in the first part of this answer, replace `pdf` with other filetypes such as `png`.

edited Sep 25 '15 at 15:07

answered Aug 22 '11 at 7:15

Andrie
102k 19 257 333

Thanks for your additional comments on lattice and ggplot2. Solved my problem exactly. – kostia Jul 9 '13 at 19:31

if you not set the path, like png(filename="name.png"), you can know the directory of save with `getwd()` – JuanPablo Jul 15 '13 at 18:51

I have extended this answer to include a reference to `dev.print` . There are two closely-related questions which I think need different answers. The second sub-question is basically "How do I save an image that I have already plotted to my screen?". Apologies if my editting isn't very good, feel free to improve on my edits. – Aaron McDaid Aug 27 '15 at 10:08

How do I do this when R asks for a "Selection"? For example If I use `m3=garchFit(~arma(3,0)+garch(1,1))` and `plot(m3)` . – jacob Jan 25 at 13:28

If you want to keep seeing the plot in R, another option is to use `dev.copy` :

```
X11 ()
plot (x,y)

dev.copy(jpeg,filename="plot.jpg");
dev.off ();
```

If you reach a clutter of too many plot windows in R, use `graphics.off()` to close all of the plot windows.

answered Sep 1 '11 at 10:31

Itamar
1,482 7 16

2 Great answer! This allows you to experiment with plots via X, until you're happy with the results, and then save them on the spot. This is usually the most convenient mode of operation. – Aaron McDaid Nov 8 '13 at 14:06

2 `dev.print` is better as it copies the image from the screen exactly. `dev.copy` forces every image to be square by default. This is frustrating if you've set up everything nicely interactively – Aaron McDaid Sep 2 '14 at 8:19

1 I use `dev.print()` with the width and height parameters to define the dimensions. e.g. `dev.copy(device = png, filename = 'MyPlot.png', width = 1000, height = 500) dev.off()` – Scott Apr 2 '15 at 1:01

If you use `ggplot2` the preferred way of saving is to use `ggsave` . First you have to plot, after creating the plot you call `ggsave` :

```
ggplot(...)
ggsave("plot.png")
```

The format of the image is determined by the extension you choose for the filename. Additional parameters can be passed to `ggsave` , notably `width` , `height` , and `dpi` .

answered Nov 17 '12 at 8:53

Paul Hiemstra
38.2k 8 69 105

Like this

```
png('filename.png')
# make plot
dev.off()
```

or this

```
# sometimes plots do better in vector graphics
svg('filename.svg')
# make plot
dev.off()
```

or this

```
pdf('filename.pdf')
# make plot
dev.off()
```

And probably others too. They're all listed together in the help pages.

answered Aug 22 '11 at 7:11

Owen
22k 5 63 96

Is there any way for R to infer the file extension automatically (i.e. based on the function)? It seems tedious to have to change the filename as well as the function used. – Bonlenfum Nov 4 '15 at 17:25

If you use R Studio http://rstudio.org/ there is a special menu to save you plot as any format you like and at any resolution you choose

answered Aug 22 '11 at 11:22

efstratios charitos
87 1

4 This also exists in the R GUI on Windows, at least. – richiemorrisroe Sep 1 '11 at 12:30

For the first question, I find `dev.print` to be the best when working interactively. First, you set up your plot visually and when you are happy with what you see, you can ask R to save the current plot to disk

```
dev.print(pdf, file="filename.pdf");
```

You can replace `pdf` with other formats such as `png` .

This will copy the image exactly as you see it on screen. The problem with `dev.copy` is that the image is often different and doesn't remember the window size and aspect ratio - it forces the plot to be square by default.

For the second question, (as others have already answered), you must direct the output to disk before you execute your plotting commands

```
pdf('filename.pdf')
plot( yourdata )
points (some_more_data)
dev.off() # to complete the writing process and return output to your monitor
```

edited Jan 14 '15 at 18:46

answered Sep 2 '14 at 8:17

Aaron McDaid
14.7k 4 37 63

If you open a device using `png()` , `bmp()` , `pdf()` etc. as suggested by ***Andrie*** (the best answer), the windows with plots will not pop up open, just *.png, *bmp or *.pdf files will be created. This is convenient in massive calculations, since R can handle only limited number of graphic windows.

However, if you want to see the plots and also have them saved, call `savePlot(filename, type)` after the plots are drawn and the window containing them is active.

answered Mar 10 '15 at 7:08

Alex Fainshtein
76 6

```
plotpath<- file.path(path, "PLOT_name",paste("plot_",file,".png",sep=""))

png(filename=plotpath)

plot(x,y, main= file)

dev.off()
```

edited Dec 23 '15 at 14:02

Sterling Archer
13.5k 10 41 73

answered Dec 23 '15 at 13:31

Gijs
11 1

a combination of what is mentioned above and r-bloggers.com/automatically-save-your-plots-to-a-folder It worked out for me! – Gijs Dec 23 '15 at 13:33

To add to these answers, if you have an R script containing calls that generate plots to screen (the native device), then these can all be saved to a pdf file (the default device for a non-interactive shell) "Rplots.pdf" (the default name) by redirecting the script into R from the terminal (assuming you are running linux or OS X), e.g.:

```
R < myscript.R --no-save
```

This could be converted to jpg/png as necessary

answered Jun 10 '15 at 11:39

wannymahoots
511 5 15