How to Animate a Graph in R

Ryan T. Moore[*]

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1 The Challenge

You want to create animations from a `ggplot` figure in R.

2 A Solution

When I ran across this blog post, I decided to try to create my own simple animation.

First, I had to install ImageMagick on my machine, for which Cactuslab has created an installer package for Mac OS X. I downloaded it and installation was smooth.

Then, I could install the `gganimate` package from Github, using the `devtools` package. My full set of installation and `library()` calls in R (which you can copy directly), then looked like

```
> install.packages(c("ggplot2", "devtools"))
> library(ggplot2)
> library(devtools)
> install_github("dgrtwo/gganimate")
> library(gganimate)
```

Then, I created a simple scatterplot of some randomly-generated (x, y) data, stored as `p` below:

```
## Create a data frame:
df <- data.frame(x = sample(100, replace = TRUE), y = runif(100))

## Create a scatterplot of y on x:
p <- ggplot(df, aes(x, y)) + geom_point(aes(frame = x, cumulative = TRUE))
```

In the code above,

- `frame = x` tells R which axis you want to animate along, x or y. By default, animating along x starts at the left and moves right, while animating along y starts at the bottom and moves up. Using `-x` or `-y` reverses the order of the animation.

- `cumulative = TRUE` tells R that I want points that appear in my animation to stay on the plot when new points are added.

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[*]Department of Government, American University, Ward Circle Building 226, 4400 Massachusetts Avenue NW, Washington DC 20016-8130. tel: 202.885.6470; fax: 202.885.2967; `rtm` (at) `american` (dot) `edu`; http://www.ryantmoore.org.

Now, create the animation:

```
gg_animate(p, interval = 1)
```

3   Adjustments

3.1   Speed

Adjusting the `interval` down speeds up the animation:

```
gg_animate(p, interval = .1)
```

3.2   The Animated Title

Setting the `title_frame` argument to `FALSE` removes the title that gives the `frame` value:

```
gg_animate(p, interval = 1, title_frame = FALSE)
```

Hope this helps!