

Combined persp and ggplot graph on the same window, persp too small

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I am combining a persp graph and a ggplot graph in the same window using plot_grid. However, the persp graph is too small, how can I make it bigger?

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```
library(pacman)
p_load(tidyverse)
p_load(mvtnorm)
p_load(cowplot)
p_load(gridGraphics)
p_load(GA)
```

```
my_mean<-c(25,65)
mycors<-seq(-1,1,by=.25)
sd_vec<-c(5,7)
```

```
i<-3
temp_cor<-matrix(c(1,mycors[i],
                    mycors[i],1),
                 byrow = T,ncol=2)
V<-sd_vec %%% t(sd_vec) *temp_cor
```

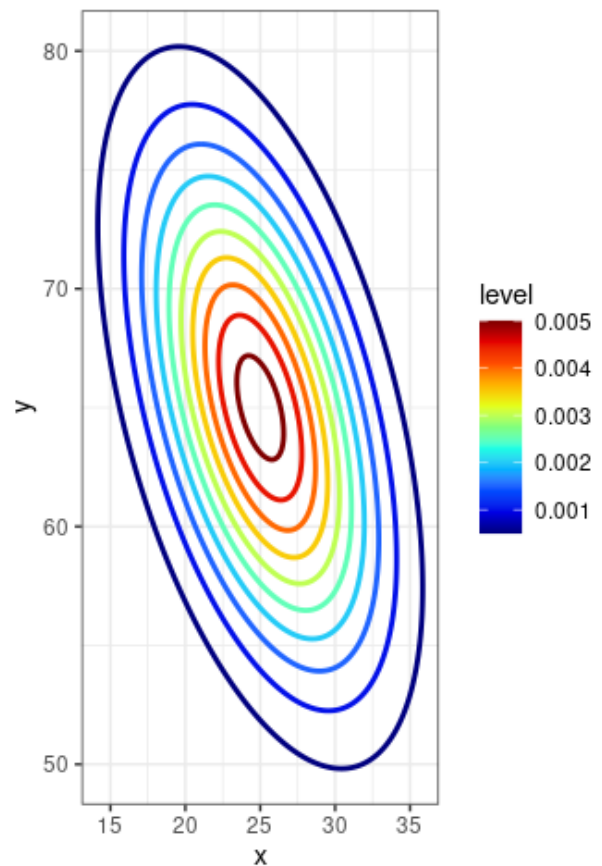
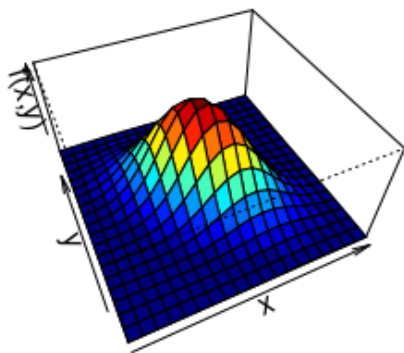
```
my_x<-seq(my_mean[1]-3*sd_vec[1], my_mean[1]+3*sd_vec[1], length.out=20)
my_y<-seq(my_mean[2]-3*sd_vec[2], my_mean[2]+3*sd_vec[2], length.out=20)
temp_f<-function(a,b){dmvnorm(cbind(a,b), my_mean,V)}
my_z<-outer(my_x, my_y,temp_f)
nlevels<-20
my_zlim <- range(my_z, finite = TRUE)
my_levels <- pretty(my_zlim, nlevels)
zz <- (my_z[-1, -1] + my_z[-1, -ncol(my_z)] + my_z[-nrow(my_z), -1] + my_z[-nrow(my_z),
-
ncol(my_z)])/4
cols <- jet.colors(length(my_levels) - 1)
zzz <- cut(zz, breaks = my_levels, labels = cols)
```

```
persp(my_x, my_y, my_z, theta = -25, phi = 45, expand =
0.5,xlab="x",ylab="y",zlab="f(x,y)",col = as.character(zzz))
```

```
p1 <- recordPlot()
```

```
data.grid <- expand.grid(x = seq(my_mean[1]-3*sd_vec[1], my_mean[1]+3*sd_vec[1],
length.out=200),
                        y = seq(my_mean[2]-3*sd_vec[2], my_mean[2]+3*sd_vec[2],
length.out=200))
q.samp <- cbind(data.grid, prob = dmvnorm(data.grid, mean = my_mean, sigma = V))
```

```
p2<-ggplot(q.samp, aes(x, y, z = prob)) +
  geom_contour(aes(color = ..level..), bins = 11, size = 1) +
  scale_color_gradientn(colours = jet.colors(11)) +
  theme_bw()
plot_grid(p1, p2)
```



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edited Oct 31, 2020 at 23:38

asked Oct 31, 2020 at 23:18



Nicolas Molano

693 4 15

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1 Answer



2



I think there are two things you need to do:

1. Set `par(mar = c(0, 0, 0, 0))` before calling `persp`. Ensure you save your default parameters before and reset them afterwards.
2. Resize your plotting window to give it a wider aspect ratio



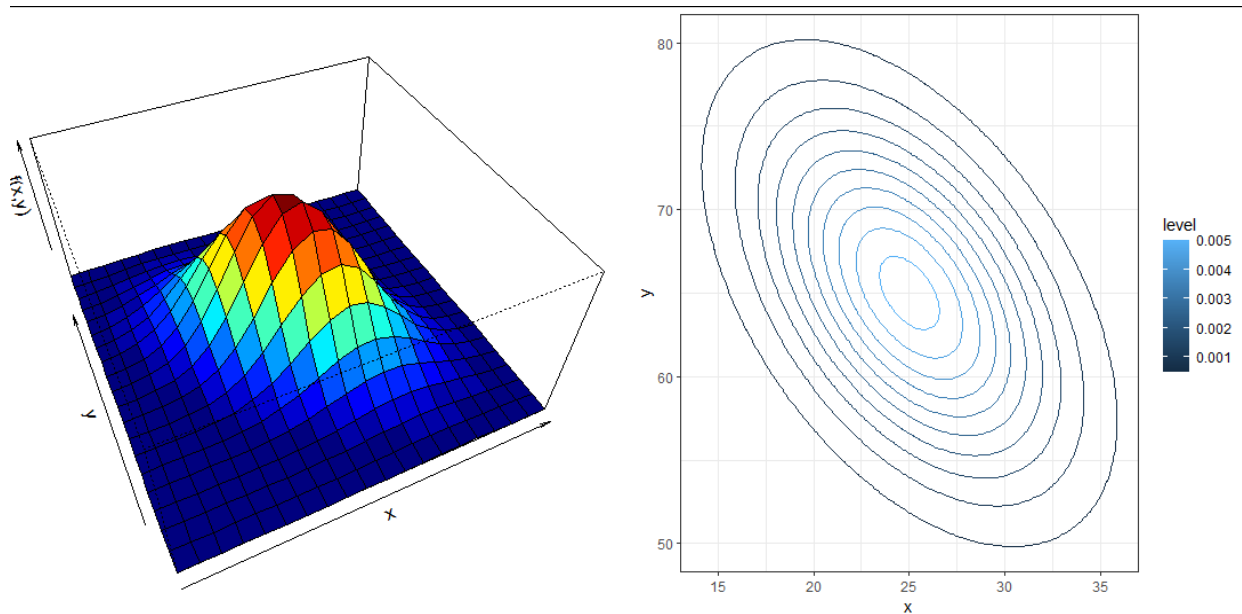
So basically you can change your `persp` call to:



```
par_store <- par()
par(mar = c(0, 0, 0, 0))
persp(my_x, my_y, my_z, theta = -25, phi = 45, expand = 0.5,
      xlab = "x", ylab = "y", zlab = "f(x,y)", col = as.character(zzz))
```

```
p1 <- recordPlot()
par(par_store)
```


And after resizing the plotting window you get:



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answered Oct 31, 2020 at 23:41



Allan Cameron 
145k 7 47 86