

```
1 library(ggplot2)
2 library(gridExtra)
3
4 bernoulli_data <- rbinom(n = 1000, size = 1, prob = 0.3)
5 binomial_data <- rbinom(n = 1000, size = 10, prob = 0.5)
6 poisson_data <- rpois(n = 1000, lambda = 3)
7
8 plot1 <- ggplot(data.frame(x = bernoulli_data), aes(x = x, fill = factor(x))) +
9   geom_bar(stat = "count", width = 0.5) +
10   labs(title = "Bernoulli Distribution", x = "Outcome (Success/Failure)", y = "Frequency") +
11   scale_fill_manual(values = c("0" = "blue", "1" = "red"))
12
13 plot2 <- ggplot(data.frame(x = binomial_data), aes(x = x, fill = factor(x))) +
14   geom_bar(stat = "count", width = 0.5) +
15   labs(title = "Binomial Distribution", x = "Number of Successes", y = "Frequency") +
16   scale_fill_brewer(palette = "Set1")
17
18 plot3 <- ggplot(data.frame(x = poisson_data), aes(x = x, fill = factor(x))) +
19   geom_bar(stat = "count", width = 0.5) +
20   labs(title = "Poisson Distribution", x = "Number of Events", y = "Frequency") +
21   scale_fill_brewer(palette = "Set3")
22
23 # Arrange plots on a single page
24 grid.arrange(plot1, plot2, plot3, ncol = 3)
25
```

Environment	History	Connections	Tutorial
R 154 MIB			
Global Environment			
Data			
plot1	List of 11		
plot2	List of 11		
plot3	List of 11		
Values			
bernoulli_data	int [1:1000]	0 0 0 0 0 0 0 0 0 1 ...	
binomial_data	int [1:1000]	5 7 3 5 5 6 6 7 5 5 ...	
poisson_data	int [1:1000]	4 2 4 6 1 2 2 5 2 2 ...	

