

Contents

1. Creating a Column Chart with Sales by Month

```
# Install and load necessary packages
install.packages("ggplot2")
```

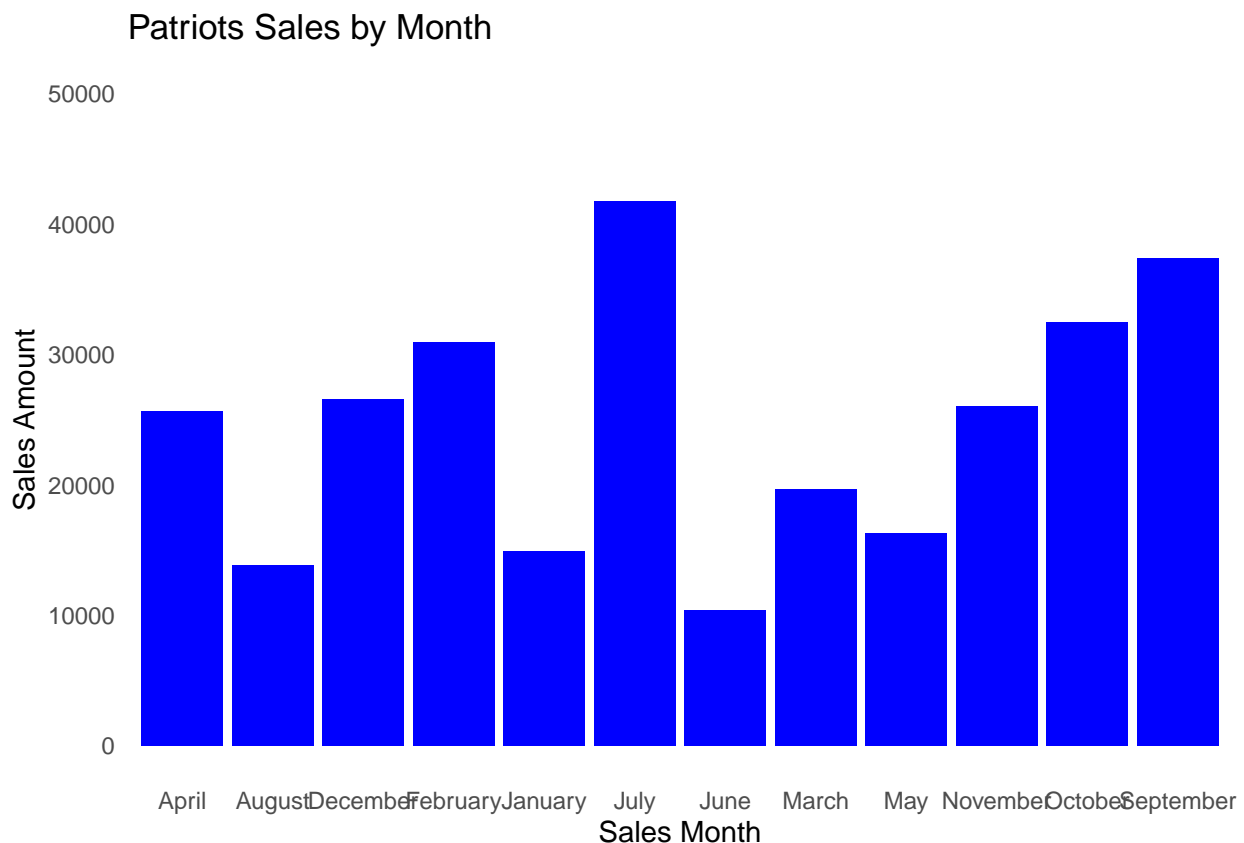
```
## Installing package into '/home/dragon/R/x86_64-pc-linux-gnu-library/4.4'
## (as 'lib' is unspecified)
```

```
library(ggplot2)
library(readxl)
```

```
# Simulated Sales Data for 12 Months
sales_data <- read_excel("~/Downloads/ALEKHA DATA EX Sales_.xlsx")
```

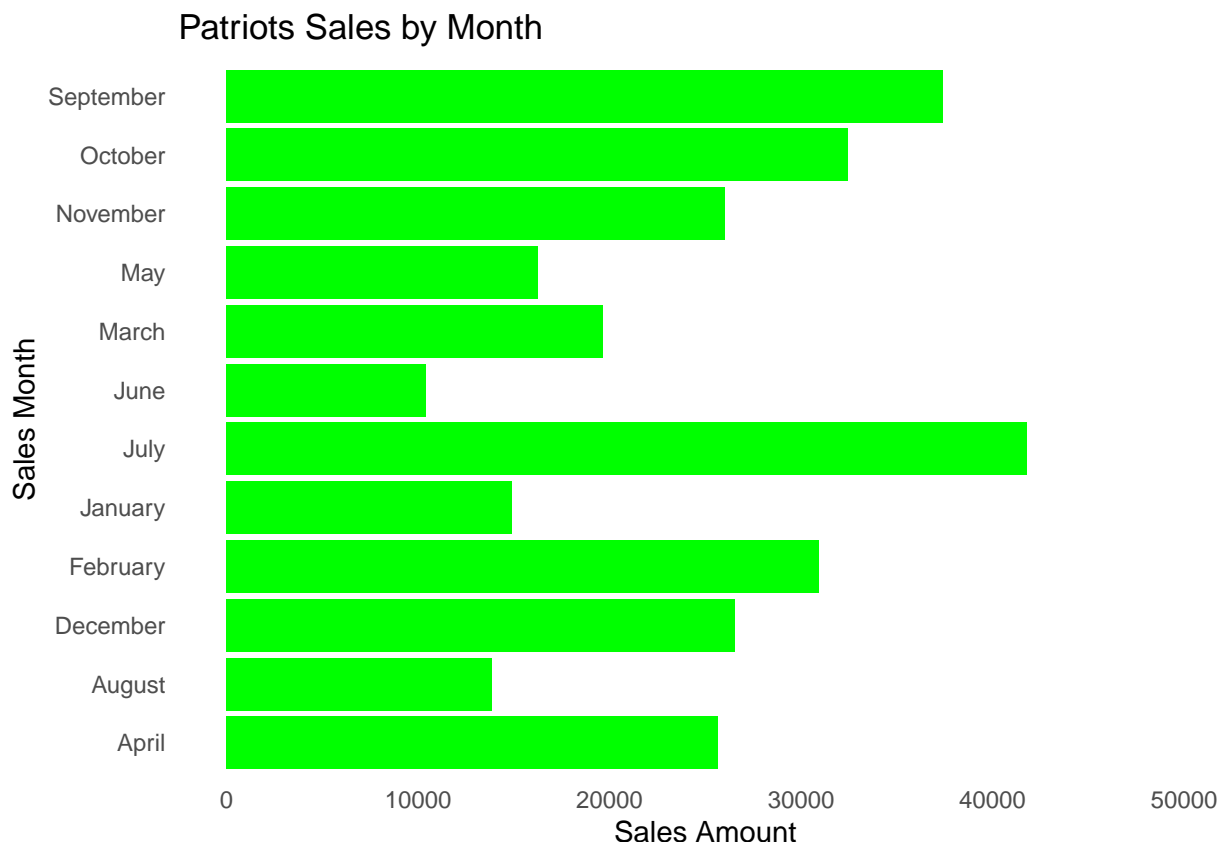
```
# 1. Create the column chart
```

```
ggplot(sales_data, aes(x = Month, y = Sales)) +
  geom_col(fill = "blue") +
  scale_y_continuous(limits = c(0, 50000)) + # Set Fixed start and end to 0 and 50,000
  labs(title = "Patriots Sales by Month", x = "Sales Month", y = "Sales Amount") +
  theme(text = element_text(size = 11)) + # Standardize font size
  theme_minimal() +
  theme(panel.grid.major = element_blank(), panel.grid.minor = element_blank()) # Remove unnecessary grid lines
```



2. Recreate the Chart with Sales Amount on the Horizontal Axis and Sales Month on the Vertical Axis

```
# 2. Recreate the column chart with switched axes
ggplot(sales_data, aes(x = Sales, y = Month)) +
  geom_col(fill = "green") +
  scale_x_continuous(limits = c(0, 50000)) + # Set Fixed start and end to 0 and 50,000
  labs(title = "Patriots Sales by Month", x = "Sales Amount", y = "Sales Month") +
  theme(text = element_text(size = 11)) + # Standardize font size
  theme_minimal() +
  theme(panel.grid.major = element_blank(), panel.grid.minor = element_blank()) # Remove unnecessary grid
```



3. Scatter Plot for “Sales by States”

Let's assume you have a dataset named `sales_by_states` with columns `State`, `Sales_Amount`, and `Average_Price`:

```
# Simulated data for sales by states
sales_by_states <- read_excel("~/Downloads/ALEKHA DATA EX Sales_.xlsx",
  sheet = "Sales by State")
sales_by_states
```

```
## # A tibble: 25 x 3
##   State      Sales 'Average Price'
```

```
##      <chr>          <dbl>          <dbl>
##  1 California      146408          31.2
##  2 Texas            116881          48.5
##  3 Florida          127672          42.0
##  4 New York         182389          38.0
##  5 Illinois          58599          24.7
##  6 Pennsylvania     90108          24.7
##  7 Ohio              82296          21.7
##  8 Georgia          154867          46.0
##  9 North Carolina   76881          38.0
## 10 Michigan         162228          41.2
## # i 15 more rows
```

```
# 3. Create the scatter plot
```

```
ggplot(sales_by_states, aes(x = Sales, y = `Average Price`)) +
  geom_point(size = 3, color = "red") +
  labs(title = "Patriots Sales by State", x = "Sales Amount", y = "Average Price") +
  theme(text = element_text(size = 11)) + # Standardize font size
  theme_minimal() +
  theme(panel.grid.major = element_blank(), panel.grid.minor = element_blank()) # Remove unnecessary grid lines
```

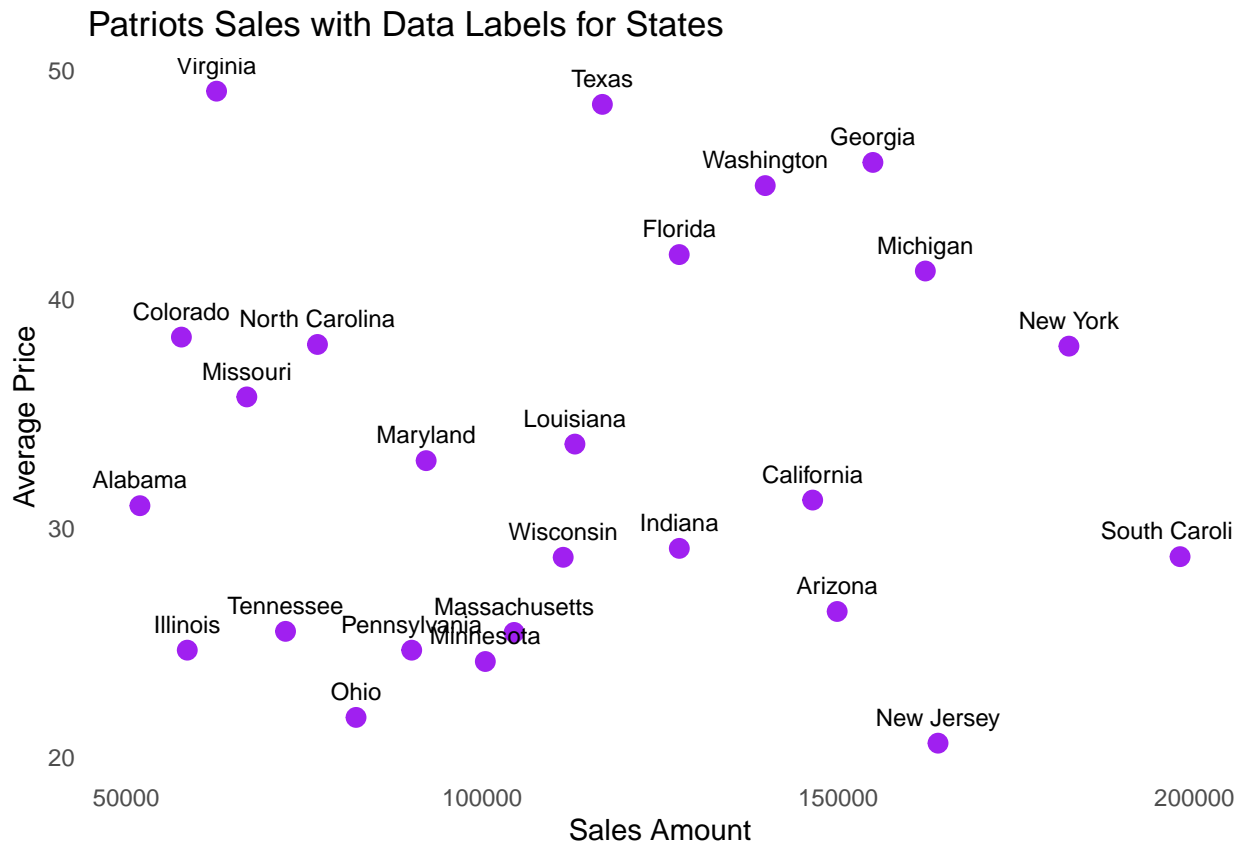


4. Scatter Plot with Data Labels for States

```
# 4. Scatter plot with state labels
```

```
ggplot(sales_by_states, aes(x = Sales, y = `Average Price`)) +
```

```
geom_point(size = 3, color = "purple") +
geom_text(aes(label = State), vjust = -1, hjust = 0.5, size = 3) + # Add state labels
labs(title = "Patriots Sales with Data Labels for States", x = "Sales Amount", y = "Average Price") +
theme(text = element_text(size = 11)) + # Standardize font size
theme_minimal() +
theme(panel.grid.major = element_blank(), panel.grid.minor = element_blank()) # Remove unnecessary grid lines
```



5. Choropleth Map

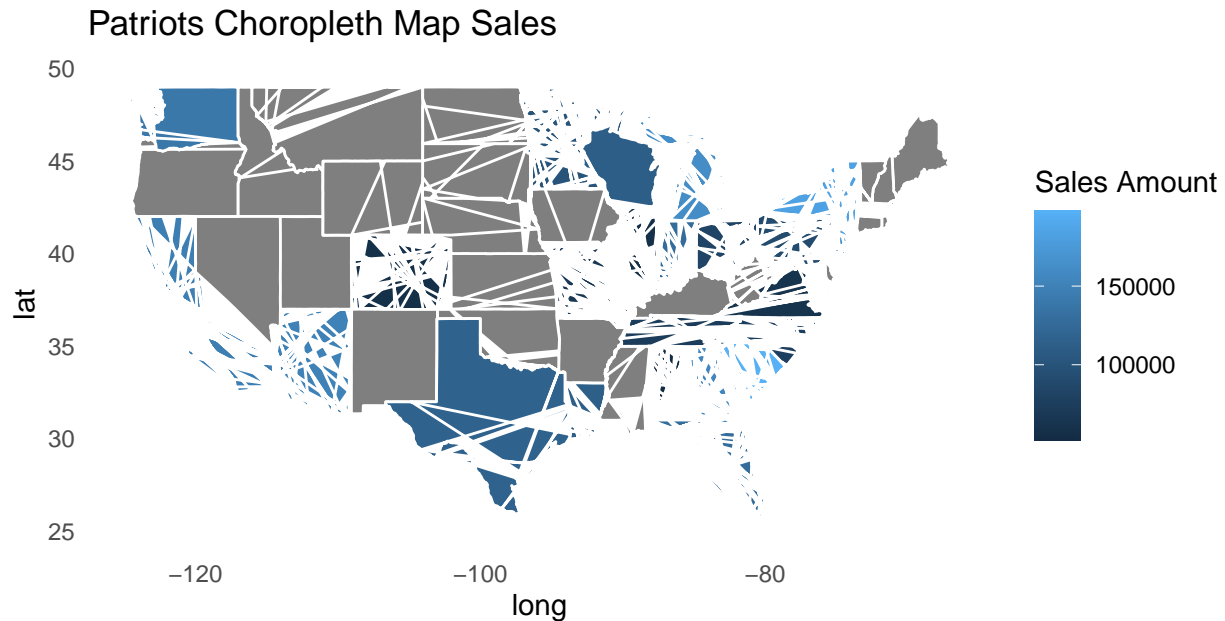
```
# Install and load necessary packages for mapping
#install.packages("maps")
library(maps)

# Assuming sales_by_states has a column 'State' and 'Sales_Amount'
states_map <- map_data("state")

# Merge sales data with map data
sales_by_states$region <- tolower(sales_by_states$State) # Convert state names to lowercase
map_data <- merge(states_map, sales_by_states, by = "region", all.x = TRUE)

# Create the Choropleth map
ggplot(map_data, aes(long, lat, group = group, fill = Sales)) +
  geom_polygon(color = "white") +
  coord_fixed(1.3) +
```

```
labs(title = "Patriots Choropleth Map Sales", fill = "Sales Amount") +
theme(text = element_text(size = 11)) + # Standardize font size
theme_minimal() +
theme(panel.grid.major = element_blank(), panel.grid.minor = element_blank()) # Remove unnecessary g
```



6. Bubble Chart for Sales

```
# 6. Create a bubble chart for sales with state labels
ggplot(sales_by_states, aes(x = Sales, y = `Average Price`, size = Sales)) +
  geom_point(color = "blue", alpha = 0.6) +
  geom_text(aes(label = State), vjust = -1, size = 3) + # Add state labels
  labs(title = "Patriots Sales with Data Labels for States", x = "Sales Amount", y = "Average Price") +
  theme(text = element_text(size = 11)) + # Standardize font size
  theme_minimal() +
  theme(panel.grid.major = element_blank(), panel.grid.minor = element_blank()) # Remove unnecessary g
```

