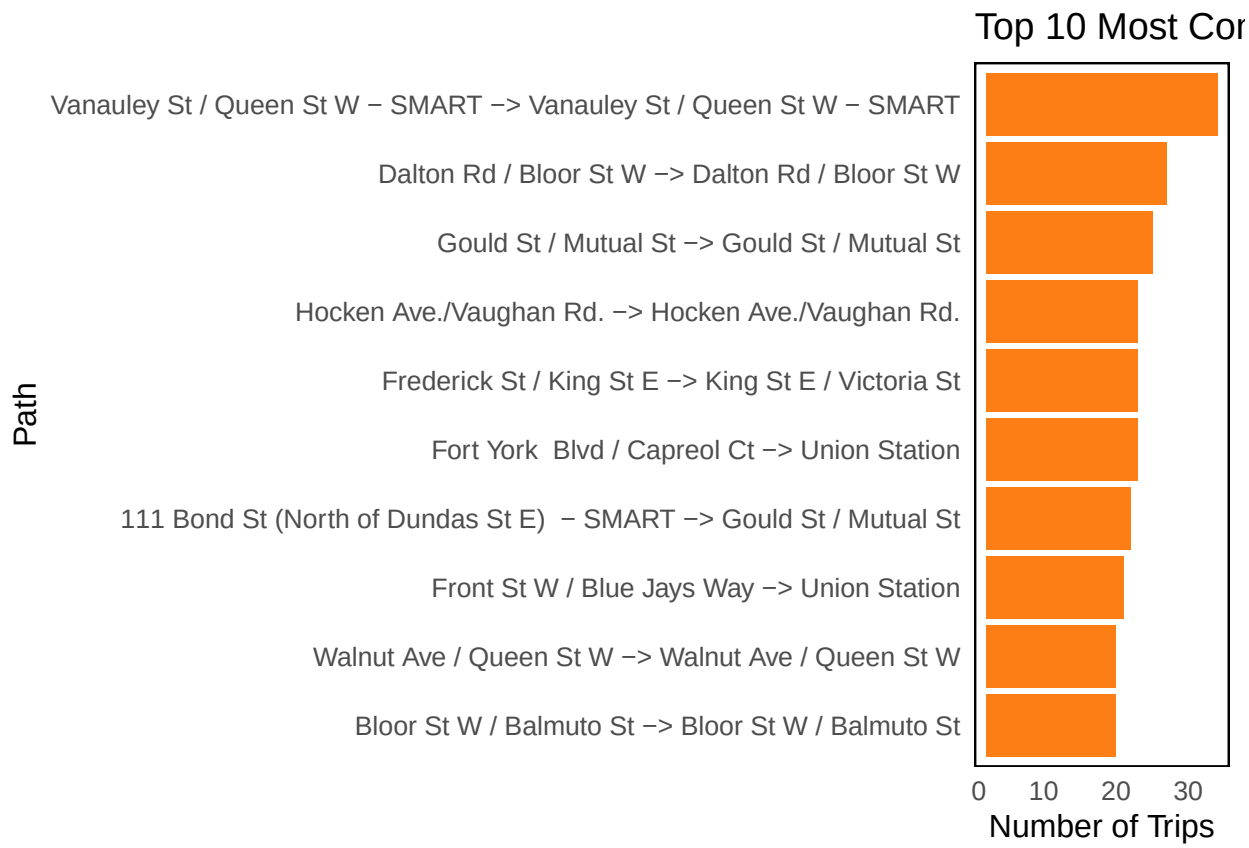
Bike Hackathon

2024-03-10

```
# Visualize the top 10 most common paths with names
top_paths <- head(common_paths, 10)
# Adjusted plot code for a white background and improved styling
ggplot(top_paths, aes(x = reorder(paste(Start_Station_Name, End_Station_Name, sep = " -> "), Path_Count
  geom_bar(stat = "identity", fill = "#FD7E14") +  # A pleasant shade of orange
  coord_flip() +  # Flip the axes for better readability
  labs(title = "Top 10 Most Common Paths", x = "Path", y = "Number of Trips") +
  theme_minimal(base_size = 12) +  # Use a minimal theme as the base
  theme(
    panel.background = element_rect(fill = "white", colour = "black"),  # White panel background
    plot.background = element_rect(fill = "white", colour = NA),  # White plot background
    panel.grid.major = element_blank(),  # Remove major grid lines
    panel.grid.minor = element_blank(),  # Remove minor grid lines
    axis.text.x = element_text(angle = 0, hjust = 1),  # Angle the x-axis text for readability
    legend.position = "none"  # Remove the legend if not necessary
  )
```

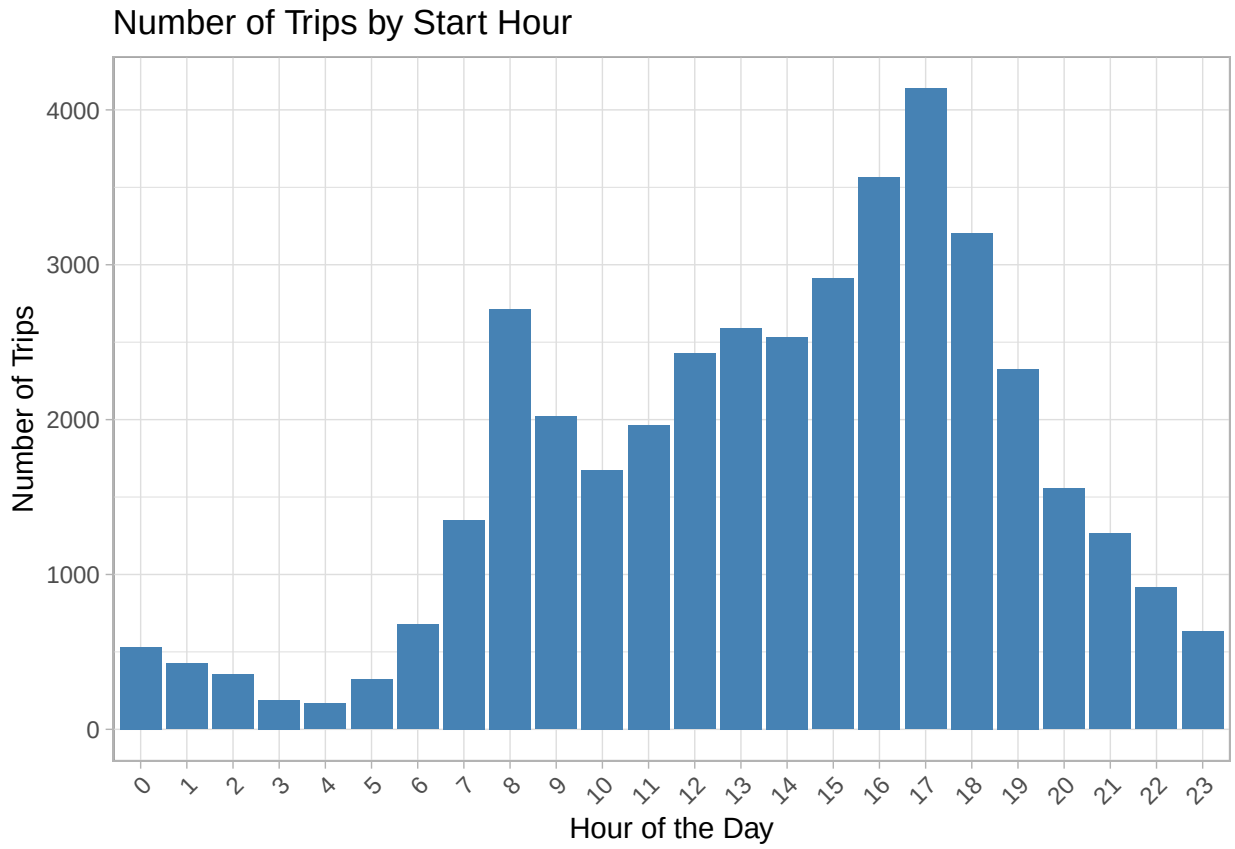


```r
# Save the plot if needed
ggsave("top_paths_styled.png", width = 10, height = 8, bg = "white")
```

```r
# Assuming Start_Time has been converted to POSIXct as you've done in your script

# Create peak hours data
peak_hours <- df %>%
  mutate(Hour = hour(Start_Time)) %>%
  group_by(Hour) %>%
  summarise(Trips = n(), .groups = 'drop') %>%
  arrange(Hour)

# Now create the plot
ggplot(peak_hours, aes(x = as.factor(Hour), y = Trips)) +
  geom_bar(stat = "identity", fill = "steelblue") +
  theme_light() +  # Light theme for better contrast
  labs(title = "Number of Trips by Start Hour", x = "Hour of the Day", y = "Number of Trips") +
  theme(
    panel.background = element_rect(fill = "white", colour = "black"),
    plot.background = element_rect(fill = "white", colour = NA),
    axis.text.x = element_text(angle = 45, hjust = 1)  # Adjust angle of x labels if needed
  )
```

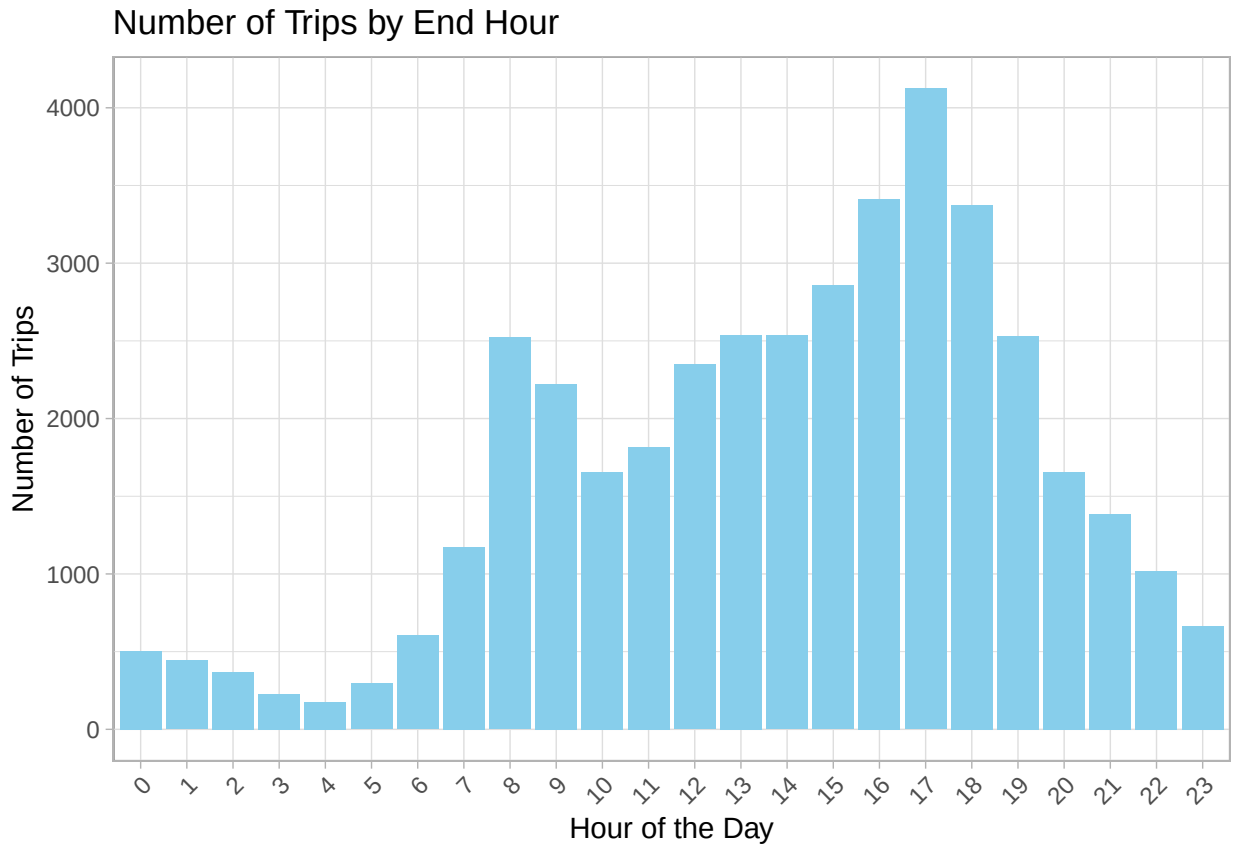


```r
# Save the peak hours plot
ggsave("peak_start_hours.png", width = 10, height = 6, bg = "white")
```

```r
# Assuming End_Time has been converted to POSIXct as you've done in your script

# Create peak end hours data
peak_end_hours <- df %>%
  mutate(Hour = hour(End_Time)) %>%
  group_by(Hour) %>%
  summarise(Trips = n(), .groups = 'drop') %>%
  arrange(Hour)

# Now create the plot for end hours
ggplot(peak_end_hours, aes(x = as.factor(Hour), y = Trips)) +
  geom_bar(stat = "identity", fill = "skyblue") +  # A different fill color for distinction
  theme_light() +  # Light theme for better contrast
  labs(title = "Number of Trips by End Hour", x = "Hour of the Day", y = "Number of Trips") +
  theme(
    panel.background = element_rect(fill = "white", colour = "black"),
    plot.background = element_rect(fill = "white", colour = NA),
    axis.text.x = element_text(angle = 45, hjust = 1)  # Adjust angle of x labels if needed
  )
```



```r
# Save the peak end hours plot
ggsave("peak_end_hours.png", width = 10, height = 6, bg = "white")
```