

Visualizing Flight Delays in NYC

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Introduction

This analysis explores the relationship between **departure delays** and **arrival delays** for flights departing New York City in 2013. The goal is to understand how delays at departure influence delays at arrival, emphasizing the importance of punctuality for airlines and travelers.

Loading the Required Packages and Data

First, we load the necessary packages and data. We are using the `nycflights13` package for the dataset and `ggplot2` for visualization.

Clean the data by removing rows with missing values

```
flights_clean <- na.omit(flights)
```

Data Visualization

To examine the relationship between departure delay (`dep_delay`) and arrival delay (`arr_delay`), we will create a scatter plot. Each point represents a single flight, with the x-axis showing departure delay (in minutes) and the y-axis showing arrival delay.

```
ggplot(flights_clean, mapping = aes(x = dep_delay, y = arr_delay)) +
  geom_point(alpha = 0.5, color = "blue") +
  labs(title = "Relationship between Departure and Arrival Delays",
       x = "Departure Delay (minutes)",
       y = "Arrival Delay (minutes)") +
  theme_minimal()
```

Relationship between Departure and Arrival Delays

