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## Reproducible Report: Lincoln Weather Analysis

### Lincoln, NE 2016 Temperature Distribution

#### Overview

This Quarto document demonstrates how to integrate external data, R code, and advanced visualizations into a single, seamless report. We are using the built-in lincoln\_weather dataset from the ggridges package to explore the distribution of mean daily temperatures throughout the year 2016. Ridge Plot Visualization

```
# Load necessary visualization and data libraries
library(ggplot2)
library(ggridges)
library(viridis)
```

Loading required package: viridisLite

```
# Load the data, which is included in the ggridges package
lincoln_weather <- ggridges::lincoln_weather

# Generate the plot
ggplot(
  lincoln_weather,
  # Use after_stat(x) for the fill aesthetic, representing the temperature
  aes(x = `Mean Temperature [F]`, y = `Month`, fill = after_stat(x))
) +
  geom_density_ridges_gradient(scale = 3, rel_min_height = 0.01) +
  scale_fill_viridis(name = "Temp. [F]", option = "C") +
  labs(
    title = "Monthly Mean Temperature Distributions in Lincoln NE (2016)",
    subtitle = "Higher density indicates more days at that specific temperature",
  ) +
```

SESSION CONNECTIONS HELP VIEWER

← → ↺ http://localhost:5801/ Zoom: (Auto) ⌵ ⌵

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```
# Load the data, which is included in the ggridges package
lincoln_weather <- ggridges::lincoln_weather

# Generate the plot
ggplot(
  lincoln_weather,
  # Use after_stat(x) for the fill aesthetic, representing the temperature gradient
  aes(x = `Mean Temperature [F]`, y = `Month`, fill = after_stat(x))
) +
  geom_density_ridges_gradient(scale = 3, rel_min_height = 0.01) +
  scale_fill_viridis(name = "Temp. [F]", option = "C") +
  labs(
    title = "Monthly Mean Temperature Distributions in Lincoln NE (2016)",
    subtitle = "Higher density indicates more days at that specific temperature.",
  ) +
  theme_ridges() +
  theme(plot.title.position = "plot")
```

Picking joint bandwidth of 3.37

#### Monthly Mean Temperature Distributions in Lincoln NE (2016)

Higher density indicates more days at that specific temperature.

Month

January  
February  
March  
April  
May  
June

Temp. [F]

75  
50  
25

Ln 39, Col 1 Spaces: 4 UTF-8 LF Quarto

>Quarto:

Explorer: Focus on **Quarto** View

⌘ F1 ⚙

**Quarto:** Clear Cache...

**Quarto:** Create Project

**Quarto:** Edit in Visual Mode

⬆ ⌘ F4

**Quarto:** Edit Mode

**Quarto:** Format Cell

⌘ K ⌘ F

**Quarto:** Go to Next Cell

⌘ PageDown

**Quarto:** Go to Previous Cell

⌘ PageUp

**Quarto:** Insert Code Cell

⬆ ⌘ I

**Quarto:** New Document

**Quarto:** New Notebook (ipynb)

**Quarto:** New Presentation

**Quarto:** Pin Assist Panel

**Quarto:** Preview

⬆ ⌘ K

**Quarto:** Preview Diagram

▼ **PLOTS**

