



Environment History Connections Tutorial

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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
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# 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.

Temp. [F]

75
50
25

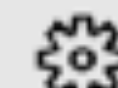
Ln 39, Col 1 Spaces: 4 UTF-8 LF Quarto

>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

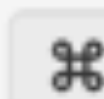


K



F

Quarto: Go to Next Cell



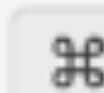
PageDown

Quarto: Go to Previous Cell



PageUp

Quarto: Insert Code Cell



I

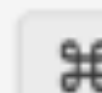
Quarto: New Document

Quarto: New Notebook (ipynb)

Quarto: New Presentation

Quarto: Pin Assist Panel

Quarto: Preview



K

Quarto: Preview Diagram

▼ **PLOTS**

