Visualizing Two Numeric Variables

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Overview

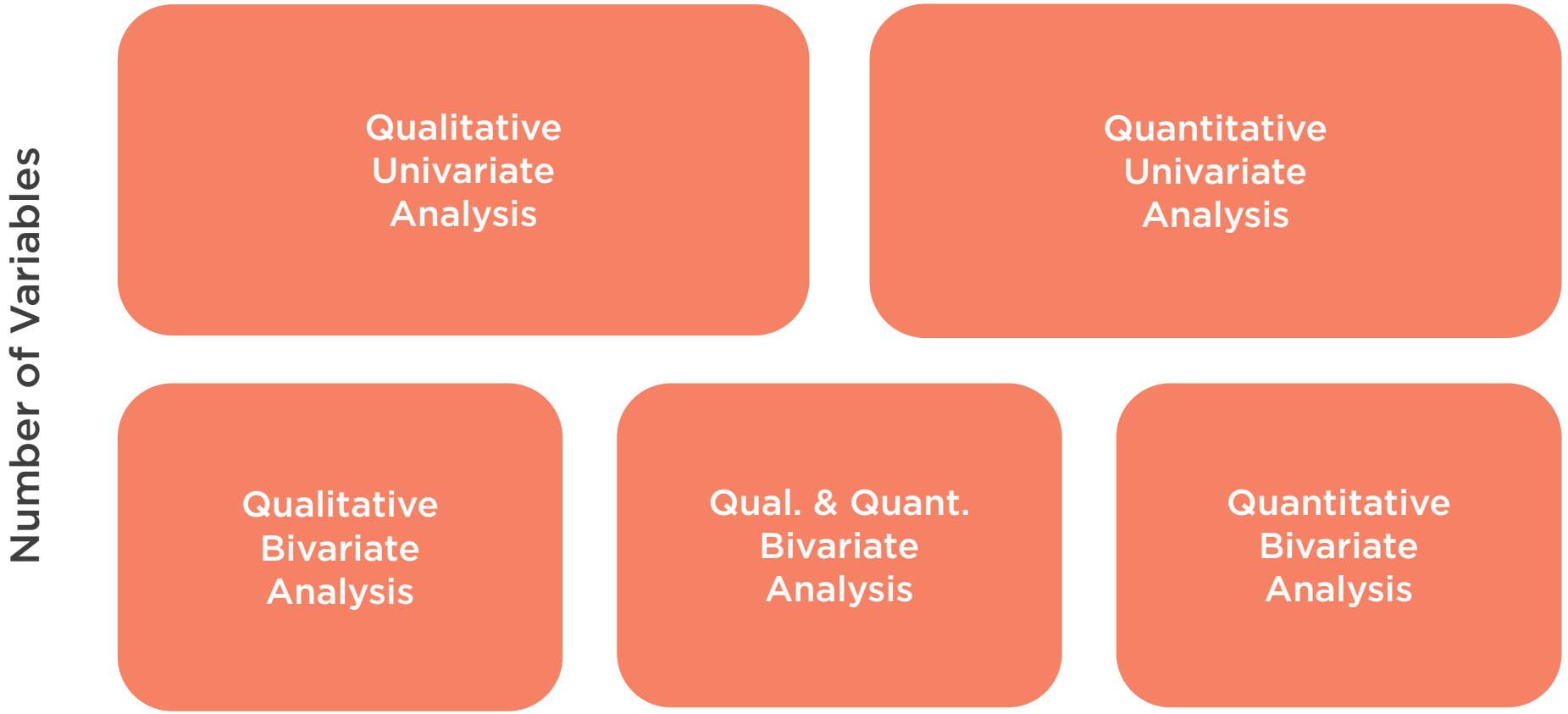
Quantitative Bivariate Analysis

Demo (Base)

Demo (Lattice)

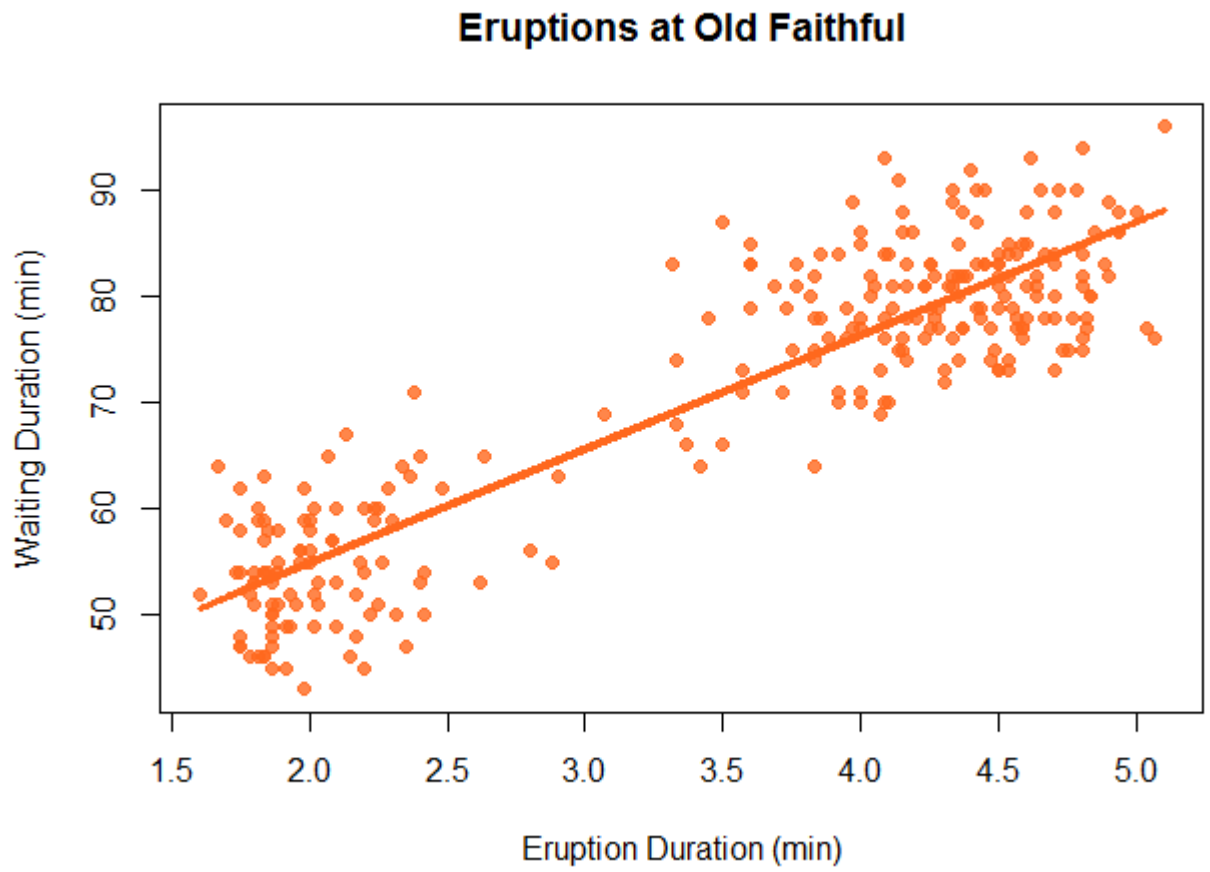
Demo (ggplot2)

Types of Data Analysis



Quantitative Bivariate Analysis

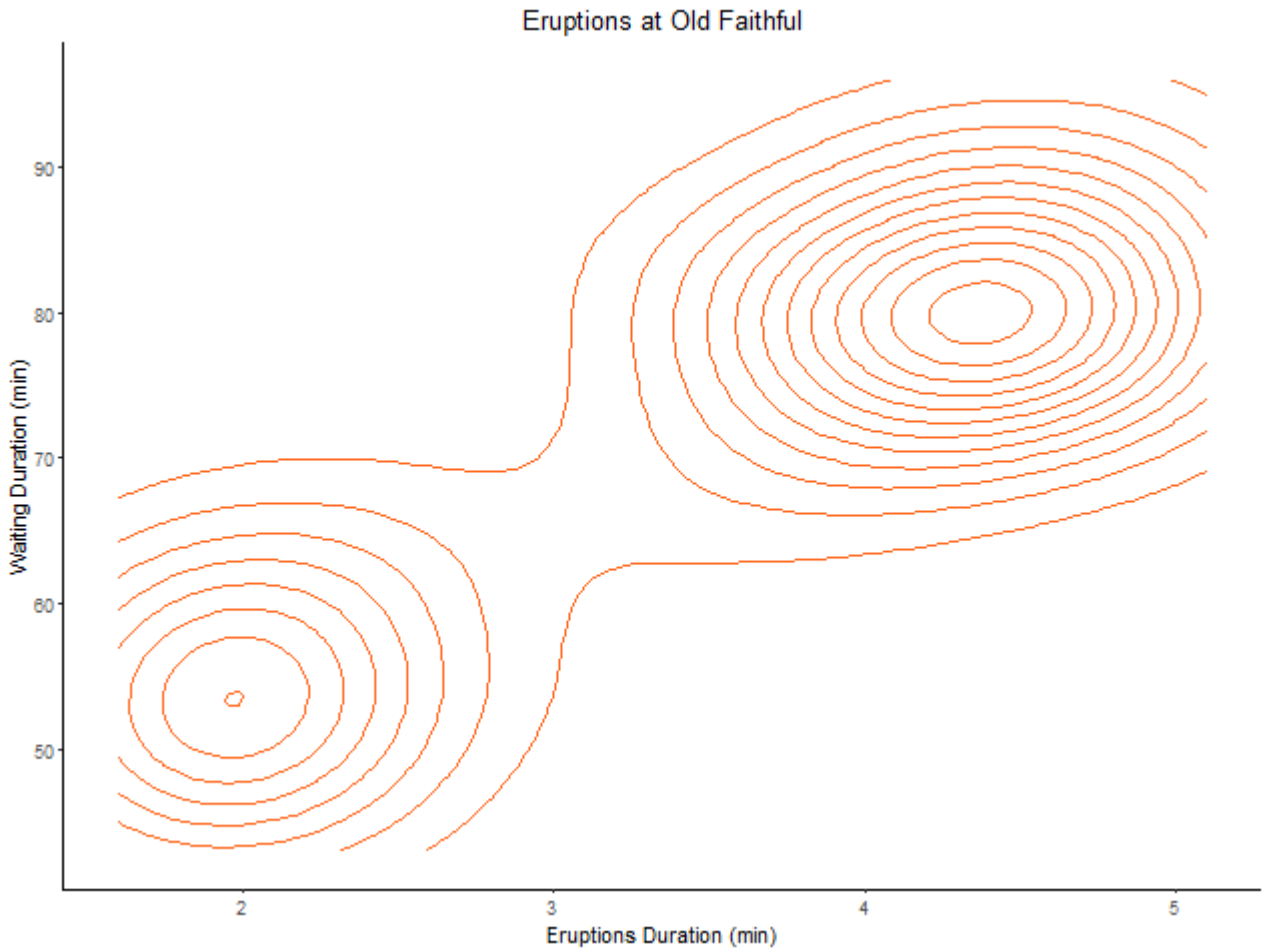
Relationship



Quantitative Bivariate Analysis

Relationship

2D density

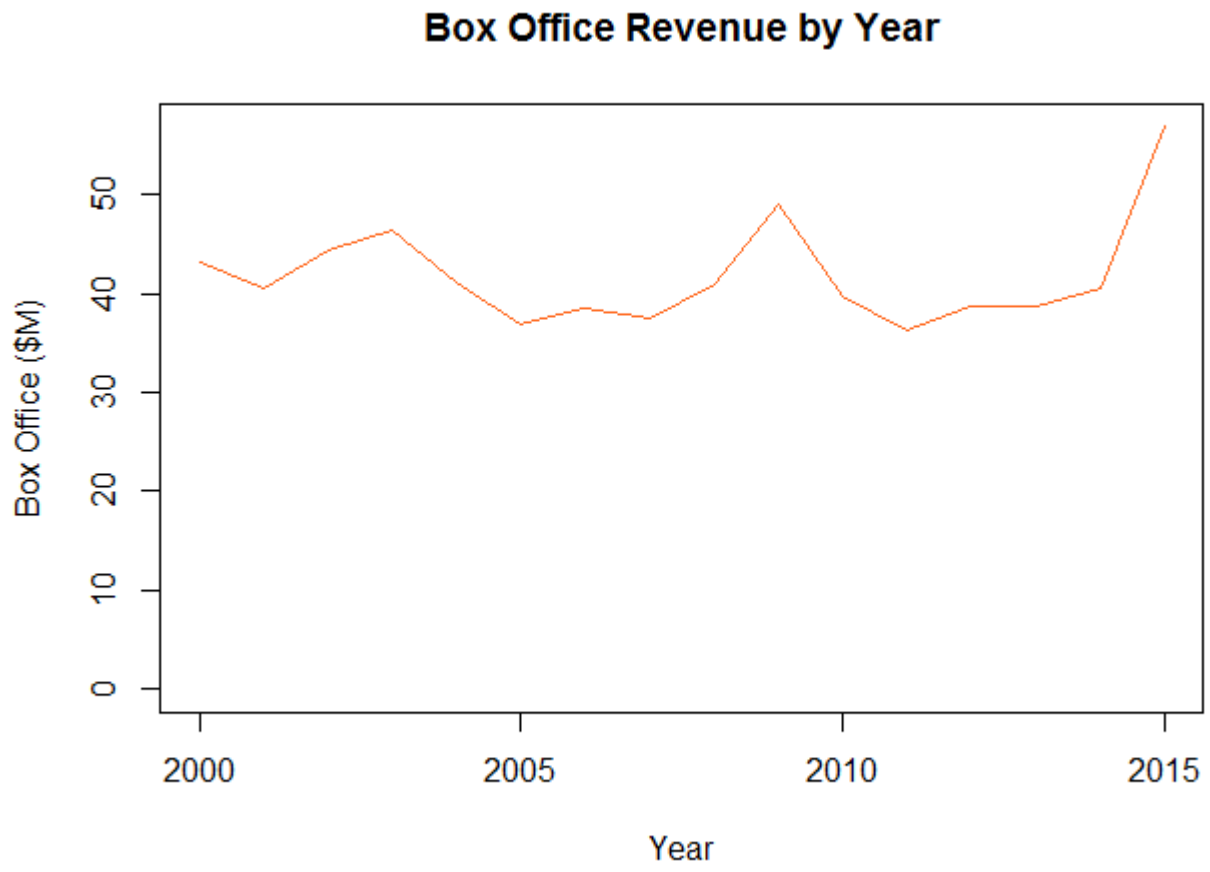


Quantitative Bivariate Analysis

Relationship

2D density

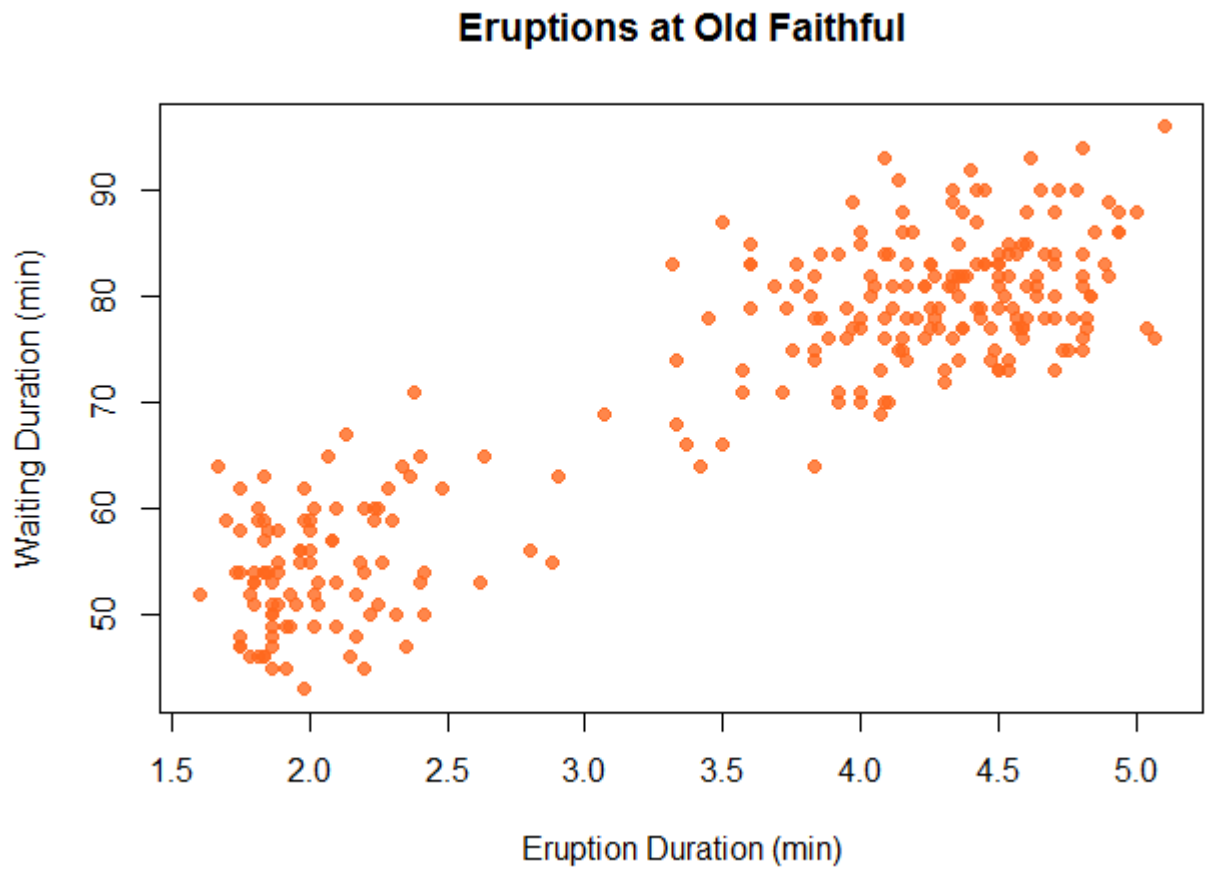
Time series



Scatterplot

Correlation

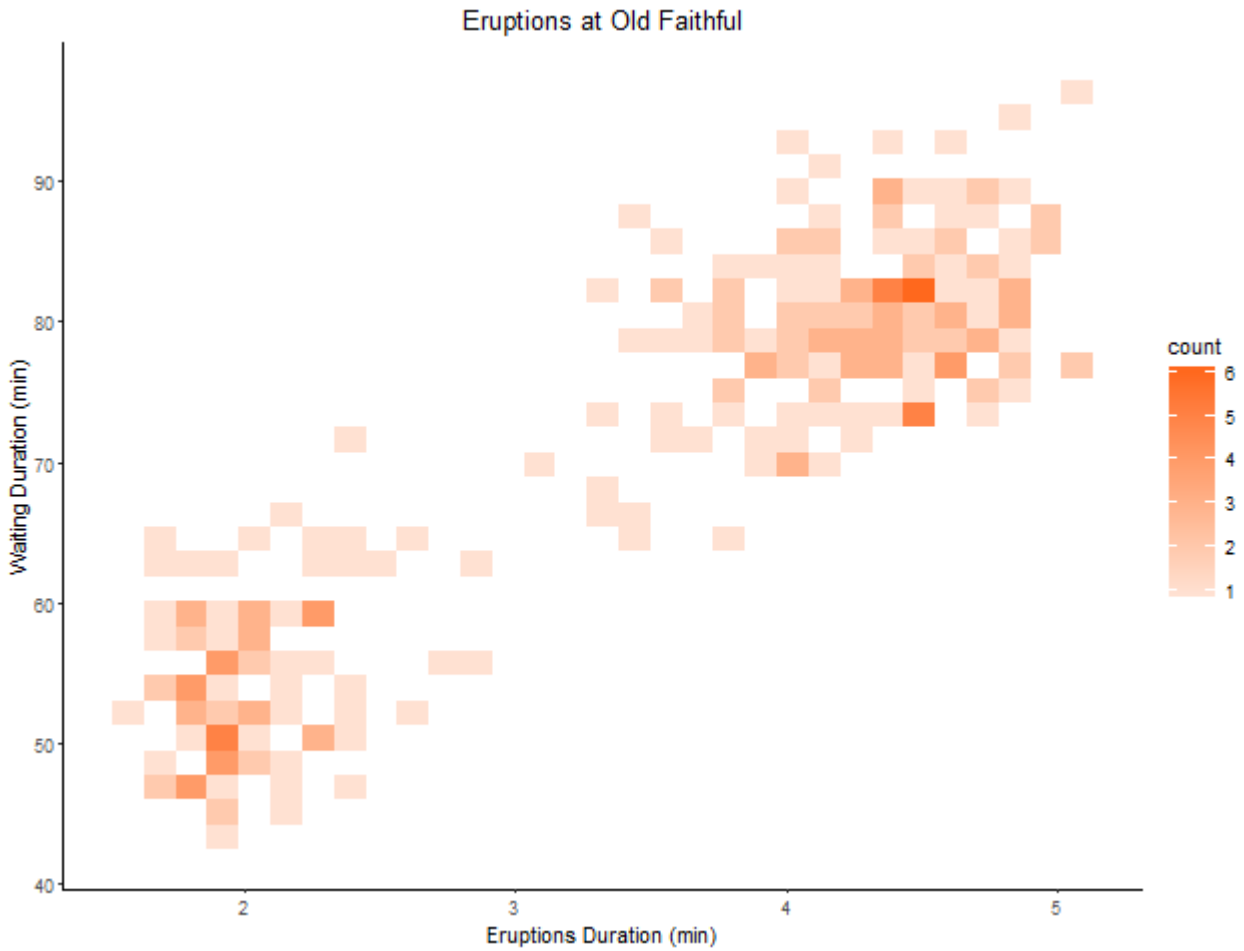
Shape



Binned Frequency Heatmap

Joint frequency

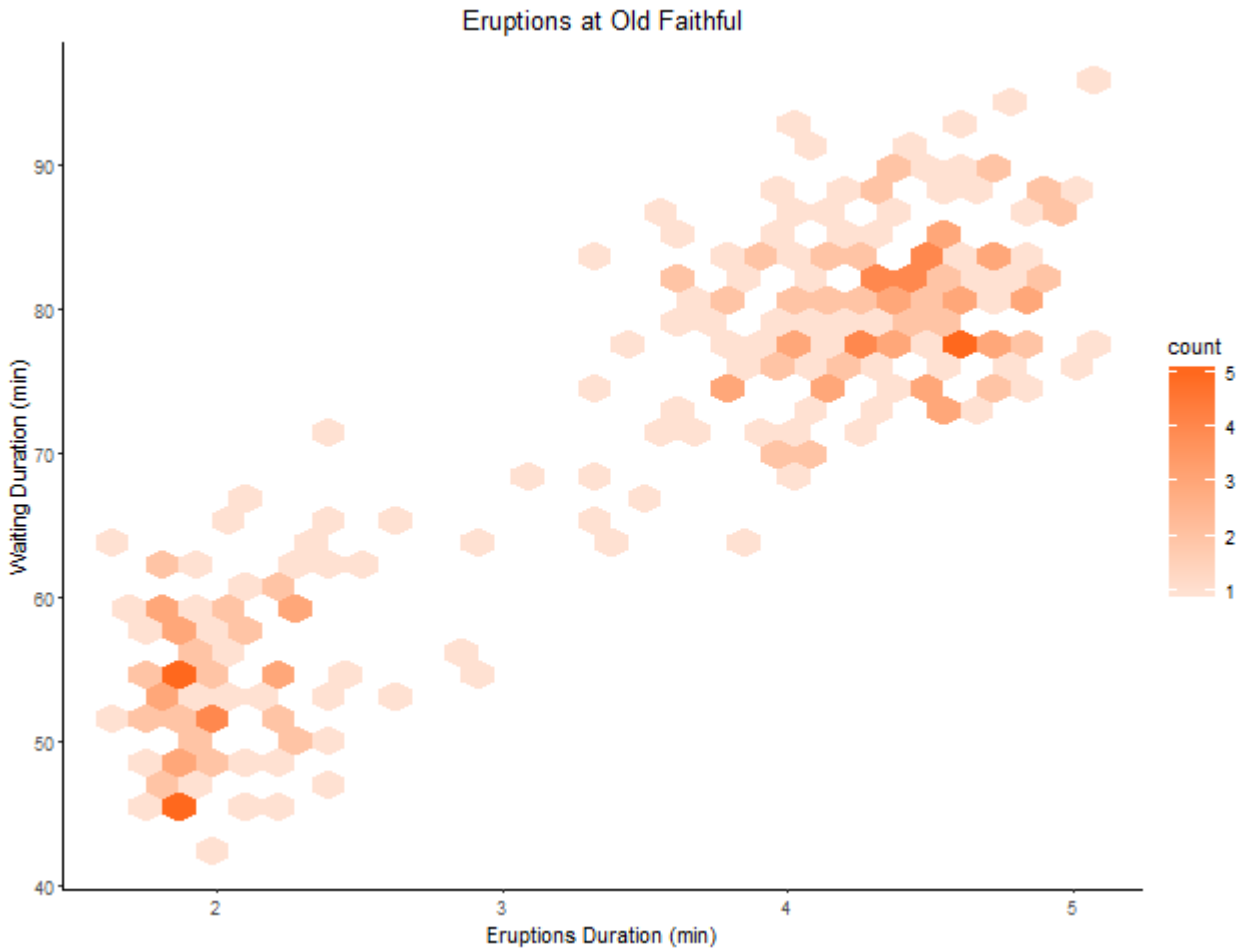
Large data sets



Hexagonal Binned Frequency Heatmap

Hexagon bins

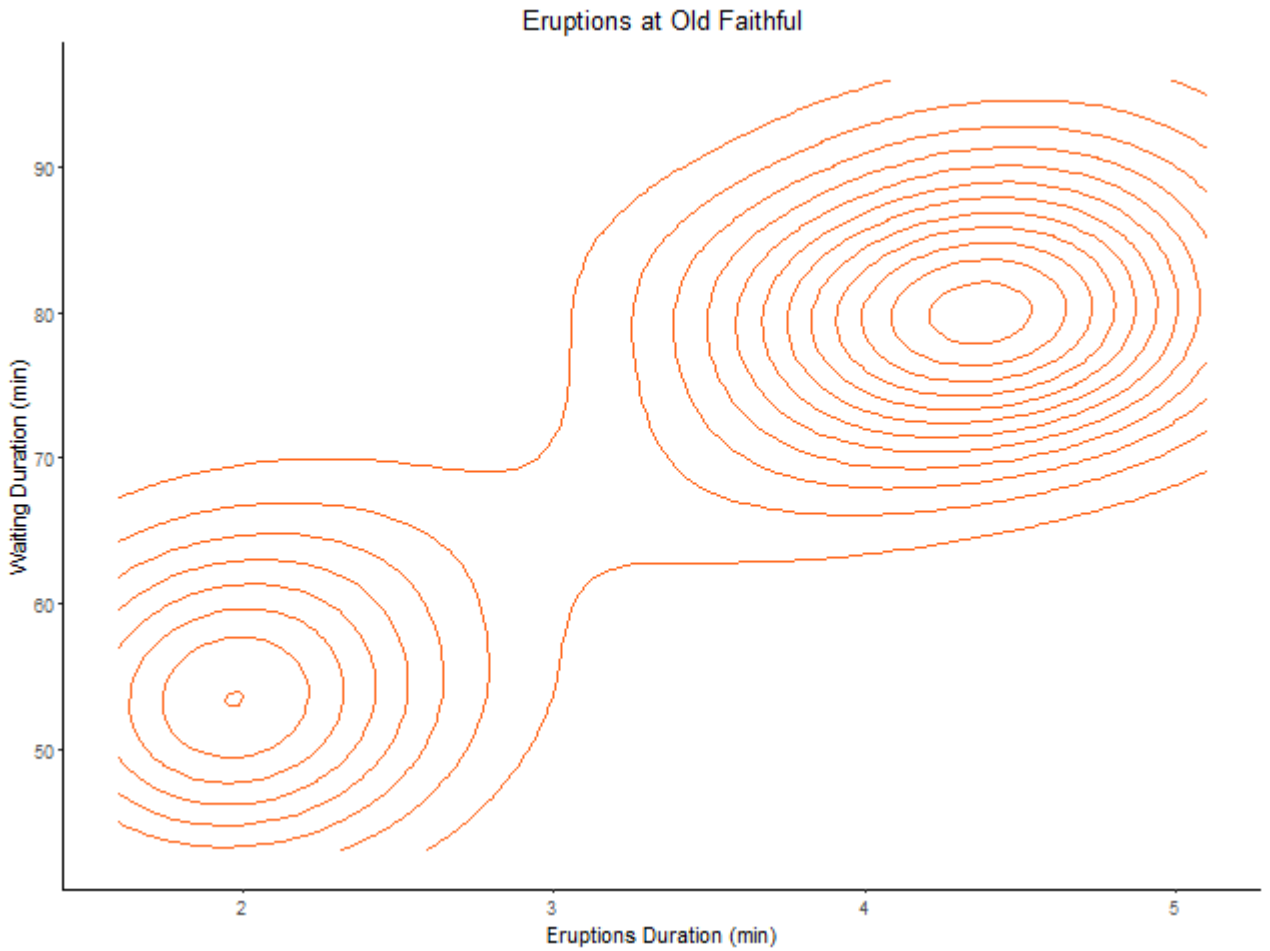
Preferred shape



Contour Plot

Contour lines

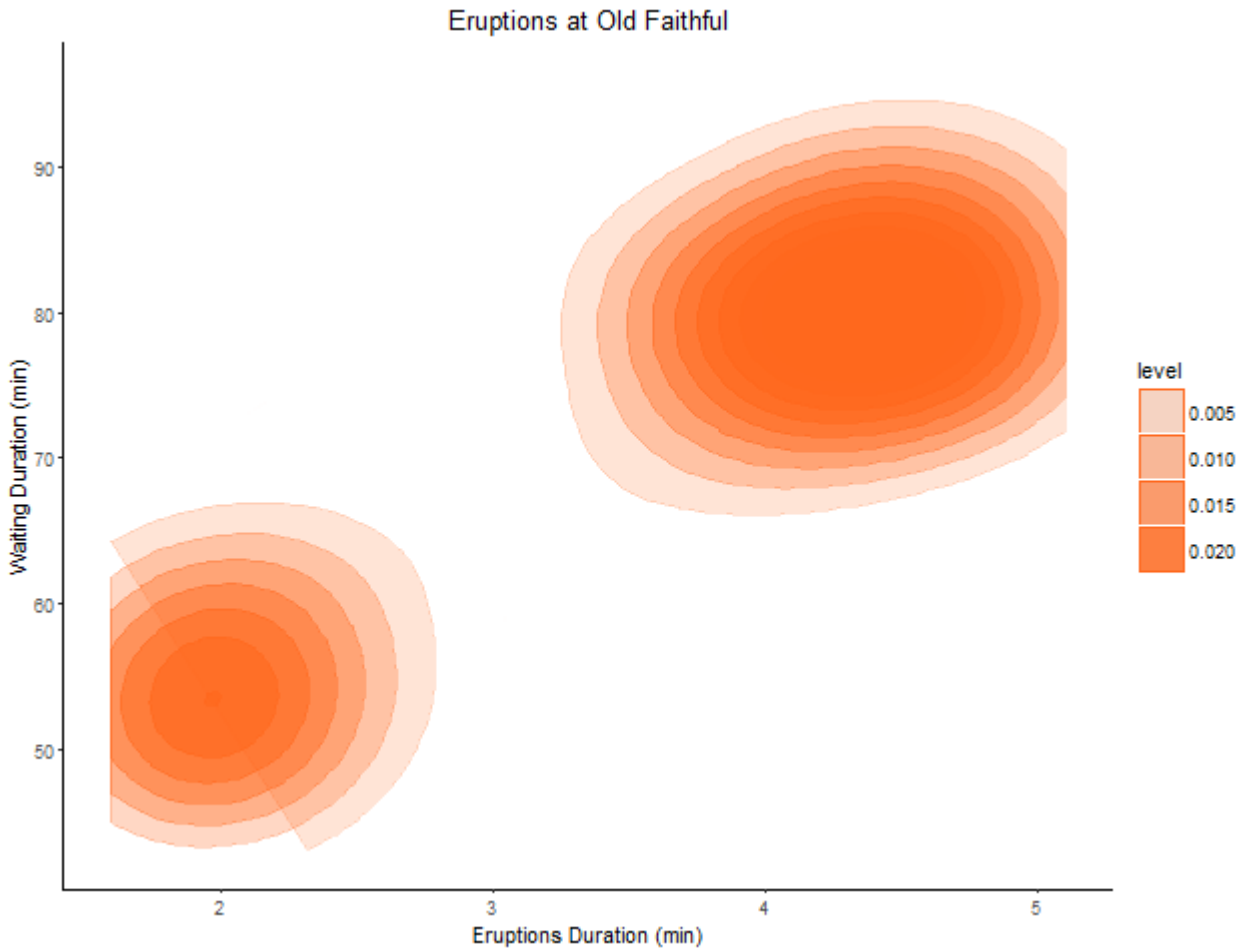
Joint density



Level Plot

Colored levels

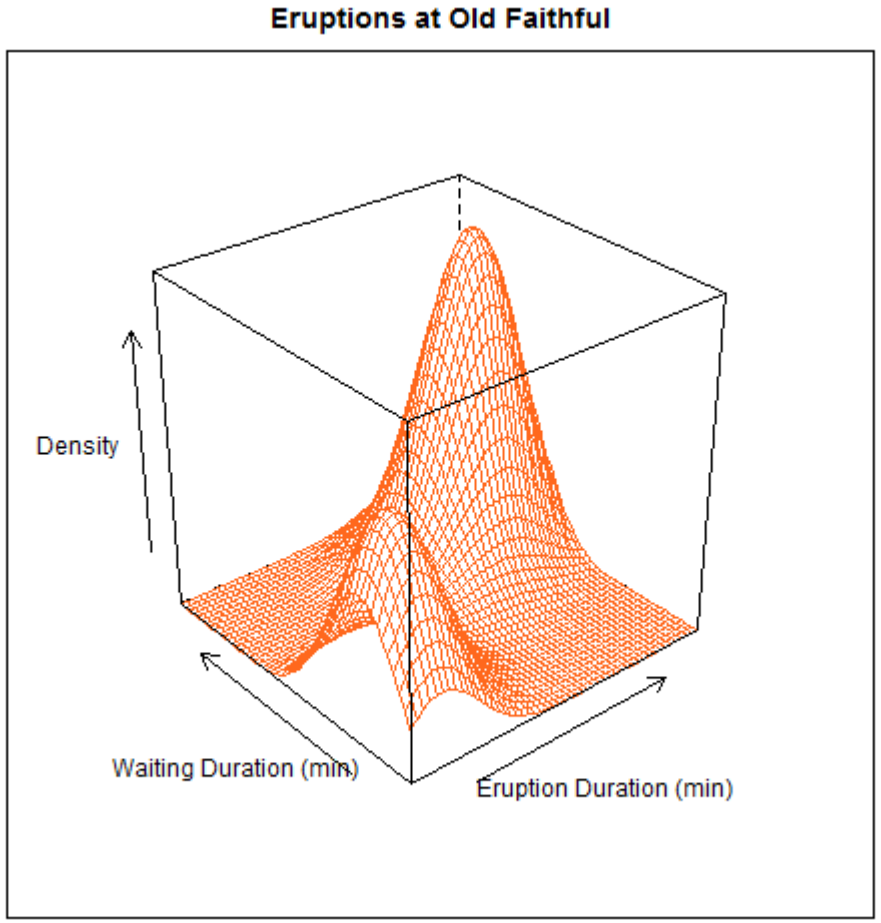
Lower data-to-ink



Mesh Plot

Draped with mesh

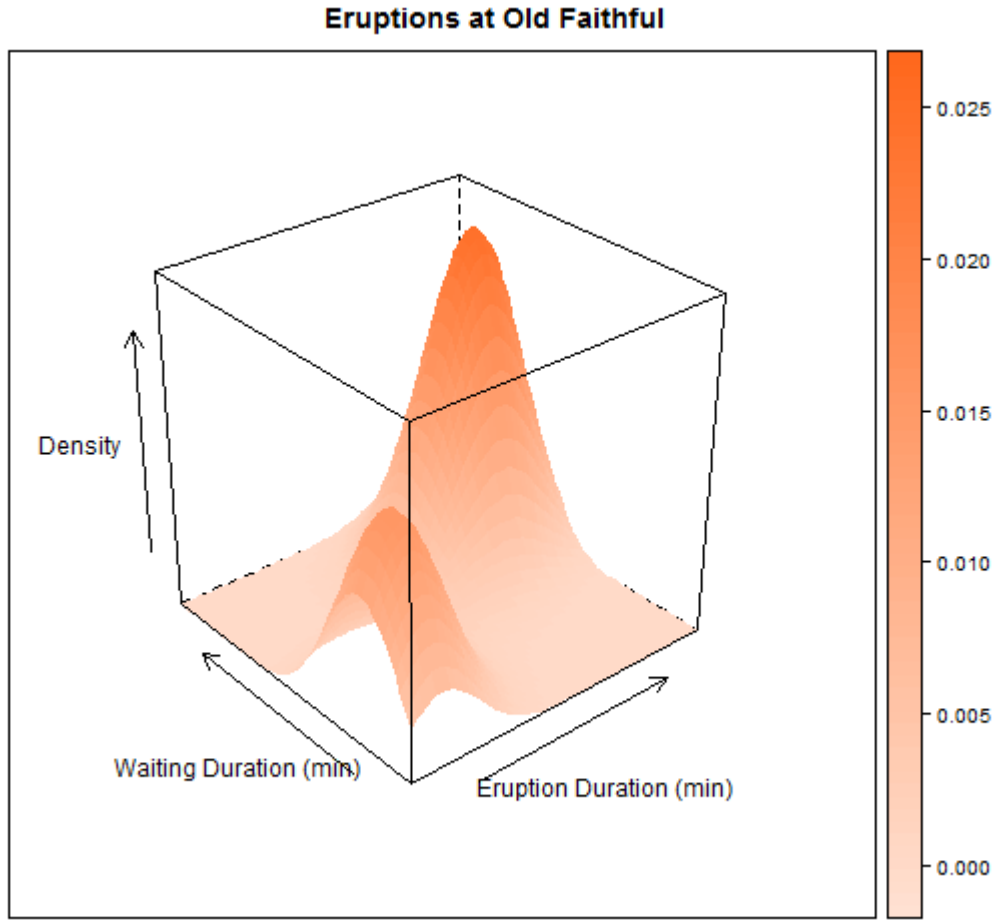
Pros and cons



Surface Plot

Draped with color

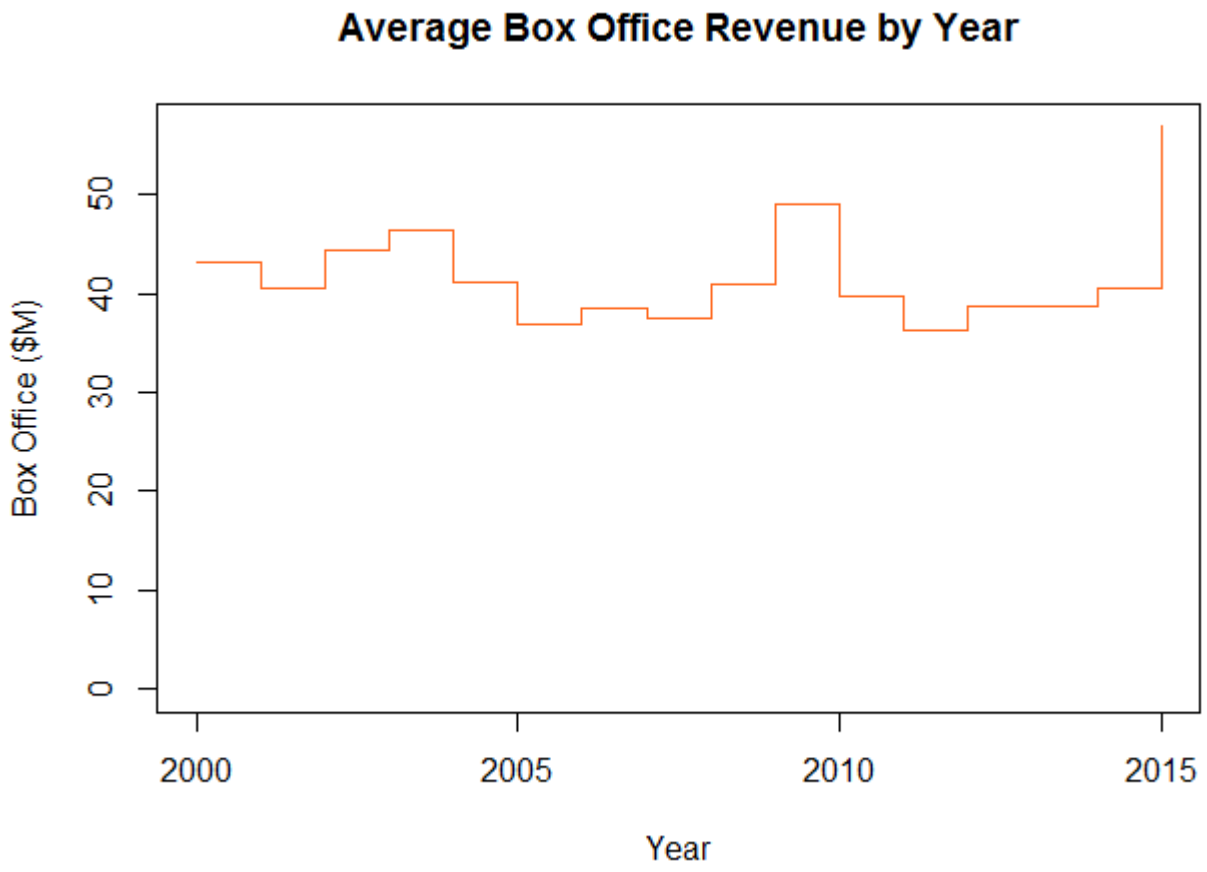
Pros and cons



Step Chart

Change over time

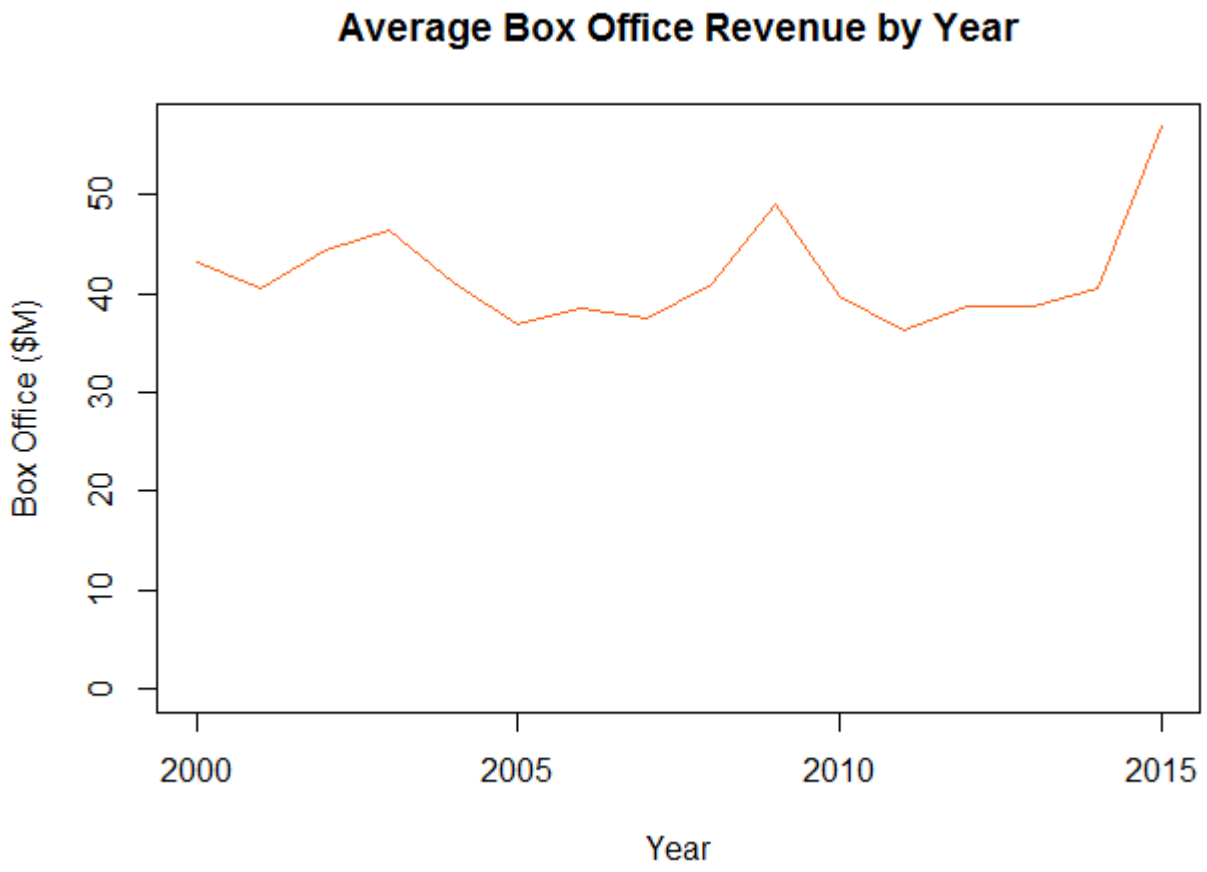
Constant values



Line Chart

Change over time

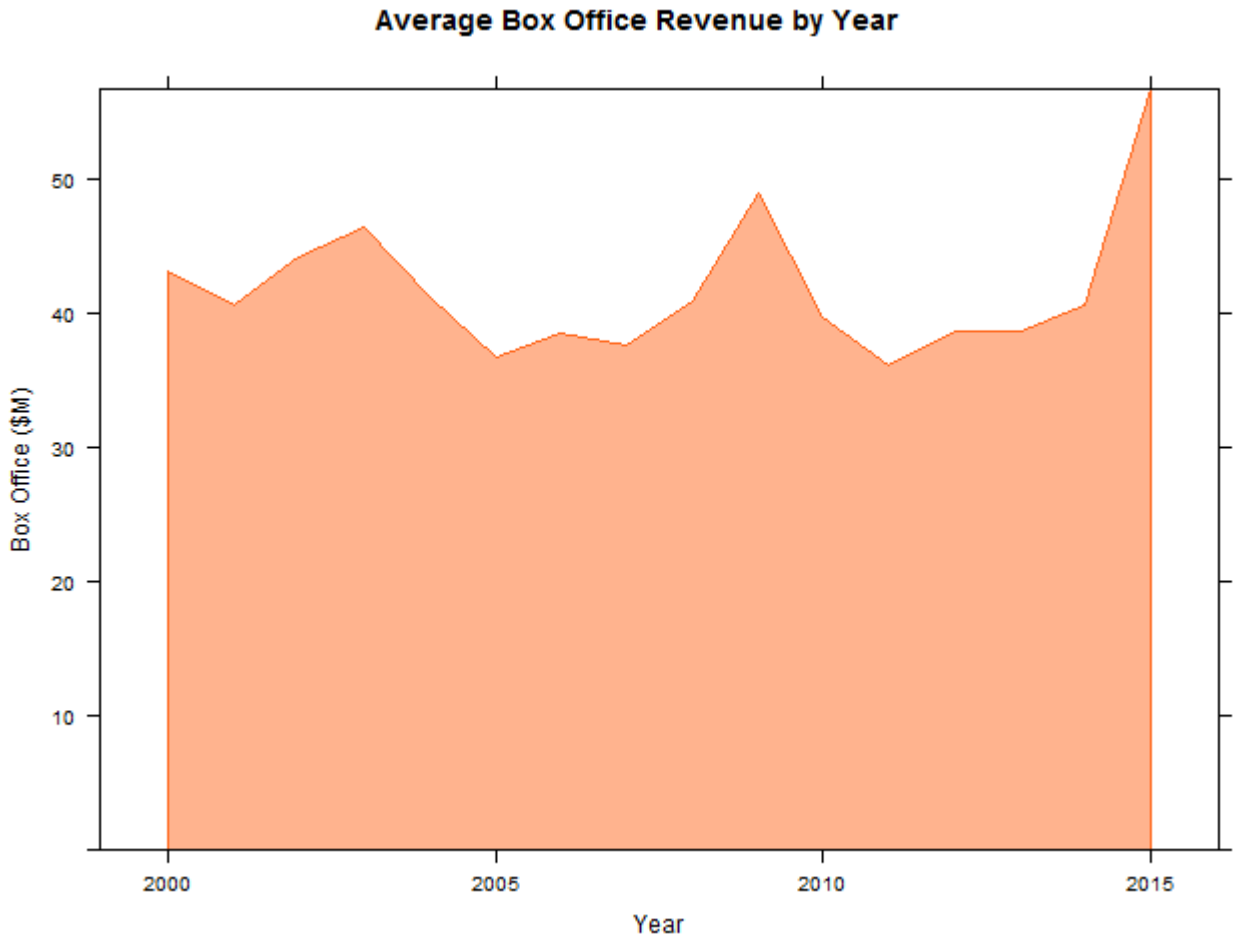
Rate of change

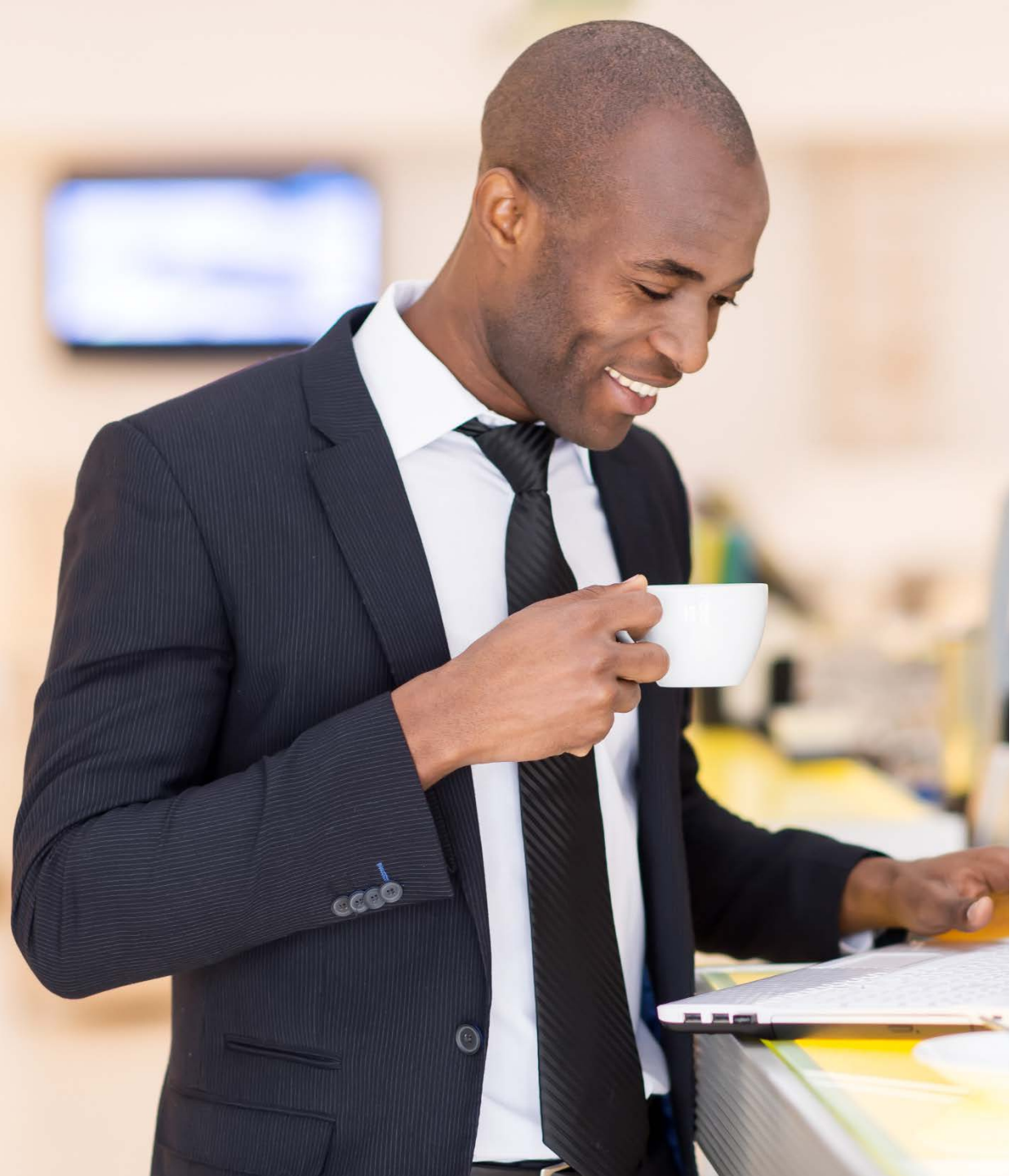


Area Chart

Change over time

Volume / summation





1. How are runtime and box-office revenue related?
2. Has the average box-office revenue changed over time?

Create a Scatterplot

Create a Linear Regression Line

Create a Hexagonal Binned Frequency Heatmap

Create a 2D Kernel Density Estimation

Create a Contour Plot

Create a Level Plot

Create a Mesh Plot

Create a Surface Plot

Load the Time Series Data

Create a Step Chart

Create a Line Chart

Create a Scatterplot

Add a Linear Regression Line

Create a Hexagonal Binned Frequency Heatmap

Create a Data Frame of 2D Kernel Density

Create a Contour Plot

Create a Level Plot

Create a Mesh Plot

Create a Surface Plot

Create a Step Chart

Create a Line Chart

Create an Area Chart

Create a Scatterplot

Add a Linear Regression Line

Create a Frequency Heatmap

Create a Hexagonal Binned Frequency Heatmap

Create a Contour Plot of Density

Create a Level Plot of Density

3D Visualizations Do Not Exist in ggplot2

Create a Step Chart

Create a Line Chart

Create an Area Chart

Summary

Quantitative Bivariate Analysis

Demo (Base)

Demo (Lattice)

Demo (ggplot2)