

Visualizing Two Categorical and One Numeric Variables



Matthew Renze

SOFTWARE CONSULTANT

@matthewrenze www.matthewrenze.com



Overview



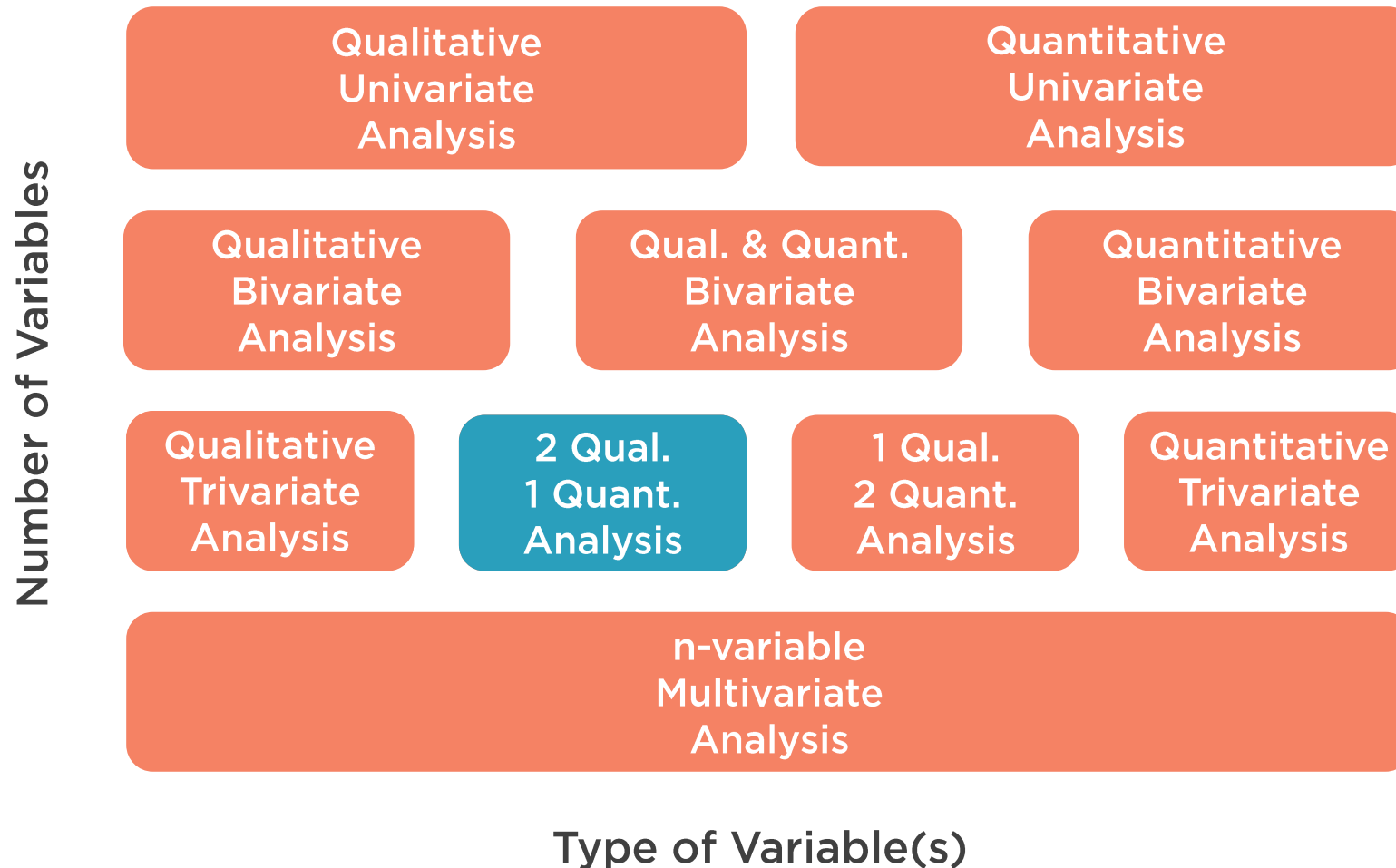
Visualizing Two Categorical and One Numeric Variables

Demo (Base)

Demo (Lattice)

Demo (ggplot2)

Types of Data Analysis



Trivariate Analysis for Two Qualitative and One Quantitative Variables

Two categorical variables

One numeric variable

Aggregate measure

| Average Box Office Revenue (\$M) | | |
|----------------------------------|-----------|------------|
| Rating | No Awards | Won Awards |
| G | 19.2 | 76.4 |
| PG | 22.4 | 76.9 |
| PG-13 | 24.4 | 75.5 |
| R | 11.8 | 29.3 |



Trivariate Analysis for Two Qualitative and One Quantitative Variables

Two categorical variables

One numeric variable

Aggregate measure

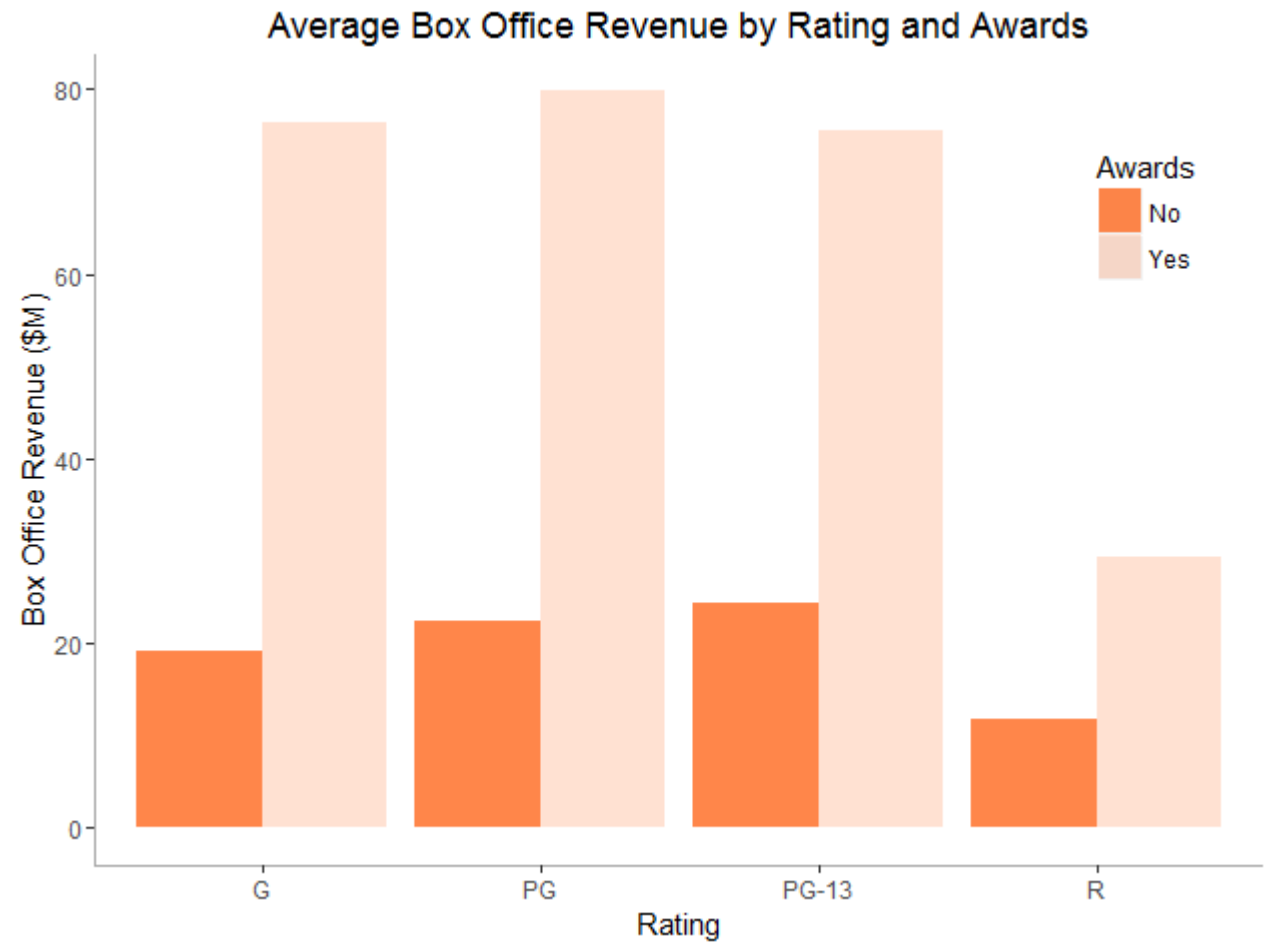
Multiple table formats

| Average Box Office Revenue (\$M) | | |
|----------------------------------|------------|------------|
| Rating | Awards | Box Office |
| G | Won Awards | 19.2 |
| G | No Awards | 76.4 |
| PG | Won Awards | 22.4 |
| PG | No Awards | 79.9 |
| PG-13 | Won Awards | 24.4 |
| PG-13 | No Awards | 75.5 |
| R | Won Awards | 11.8 |
| R | No Awards | 29.3 |



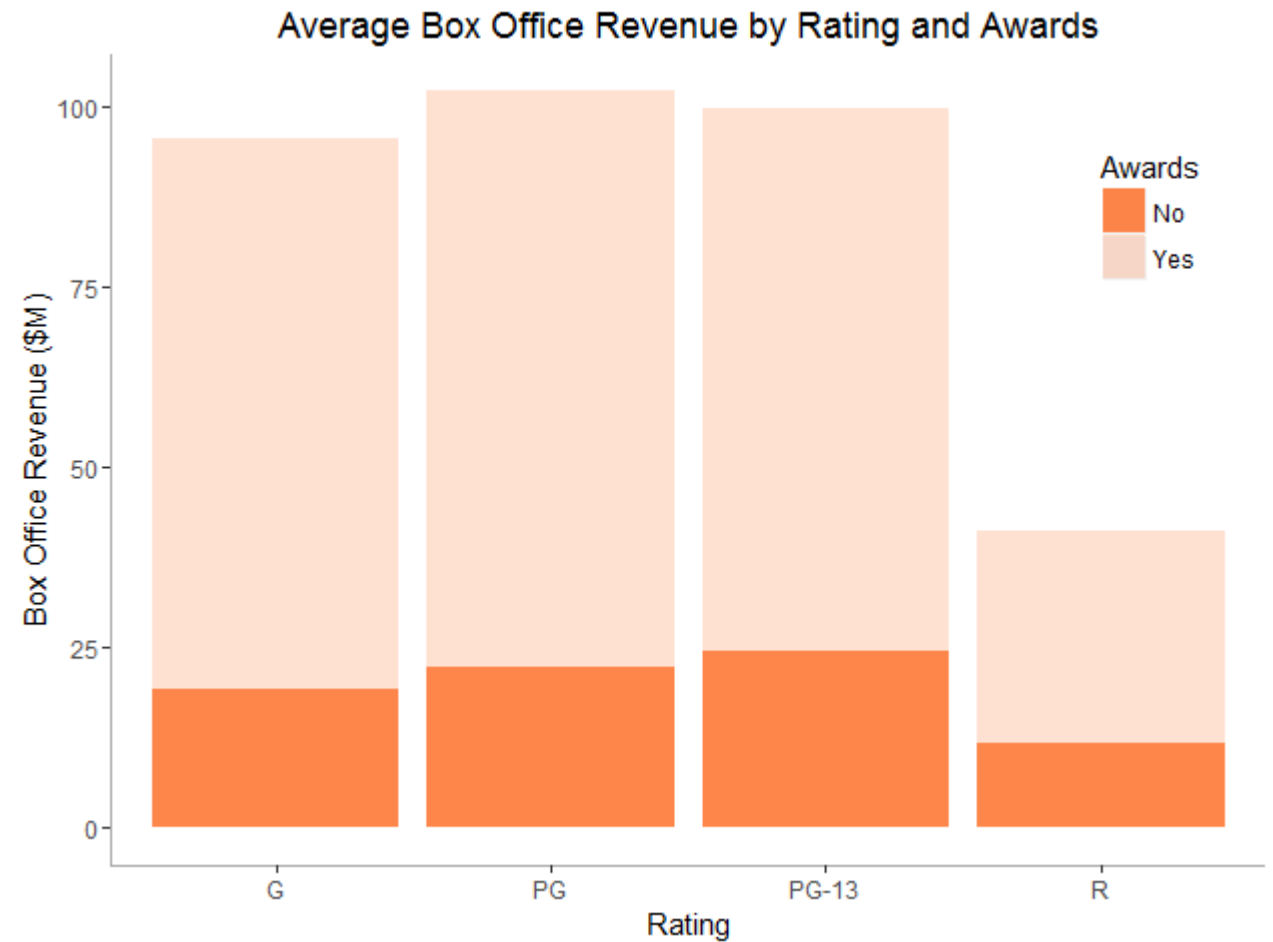
Grouped Bar Chart

Grouped bars
Aggregate measure



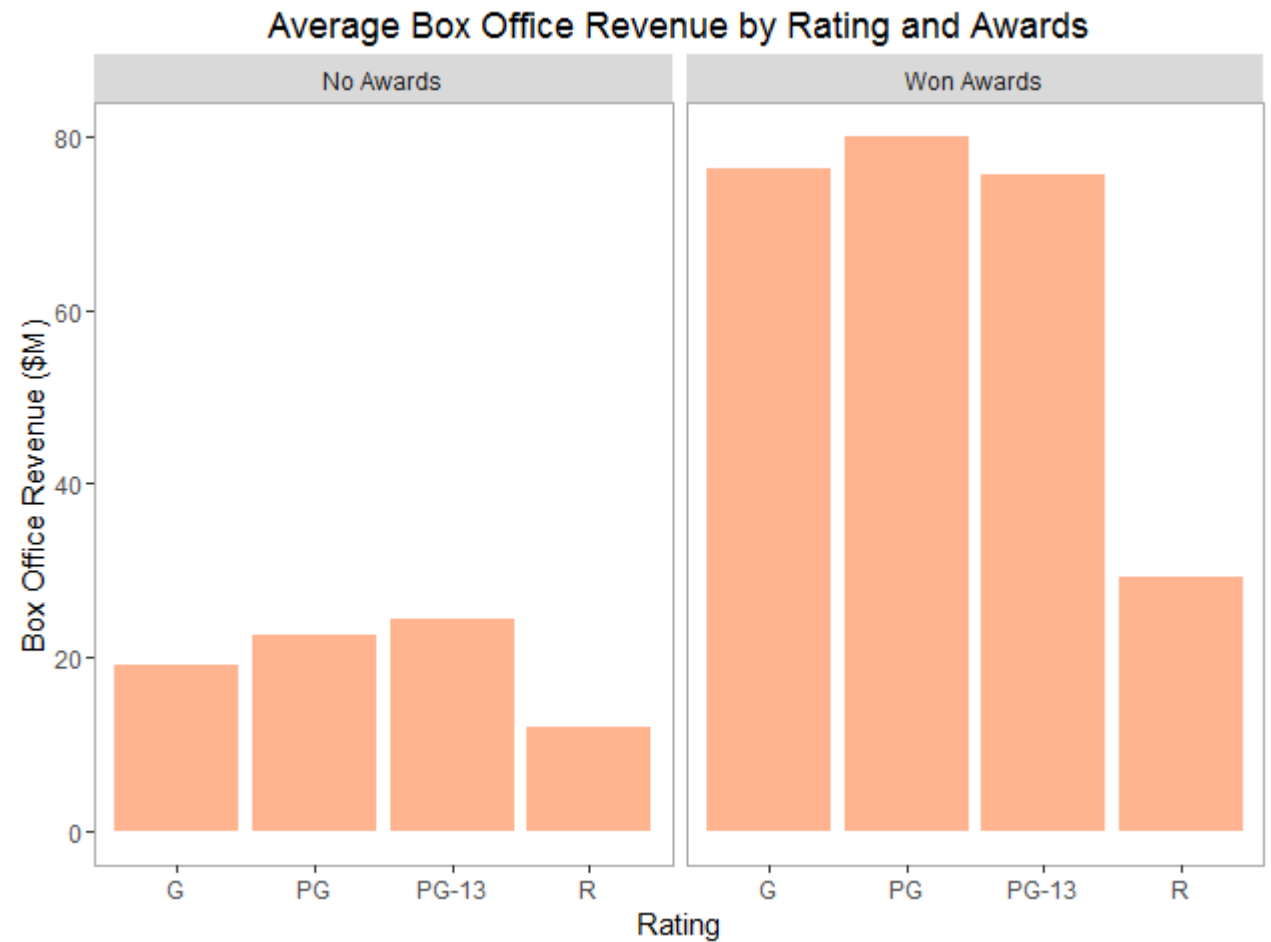
Stacked Bar Chart

Stacked bars
Aggregate measure
Marginal value



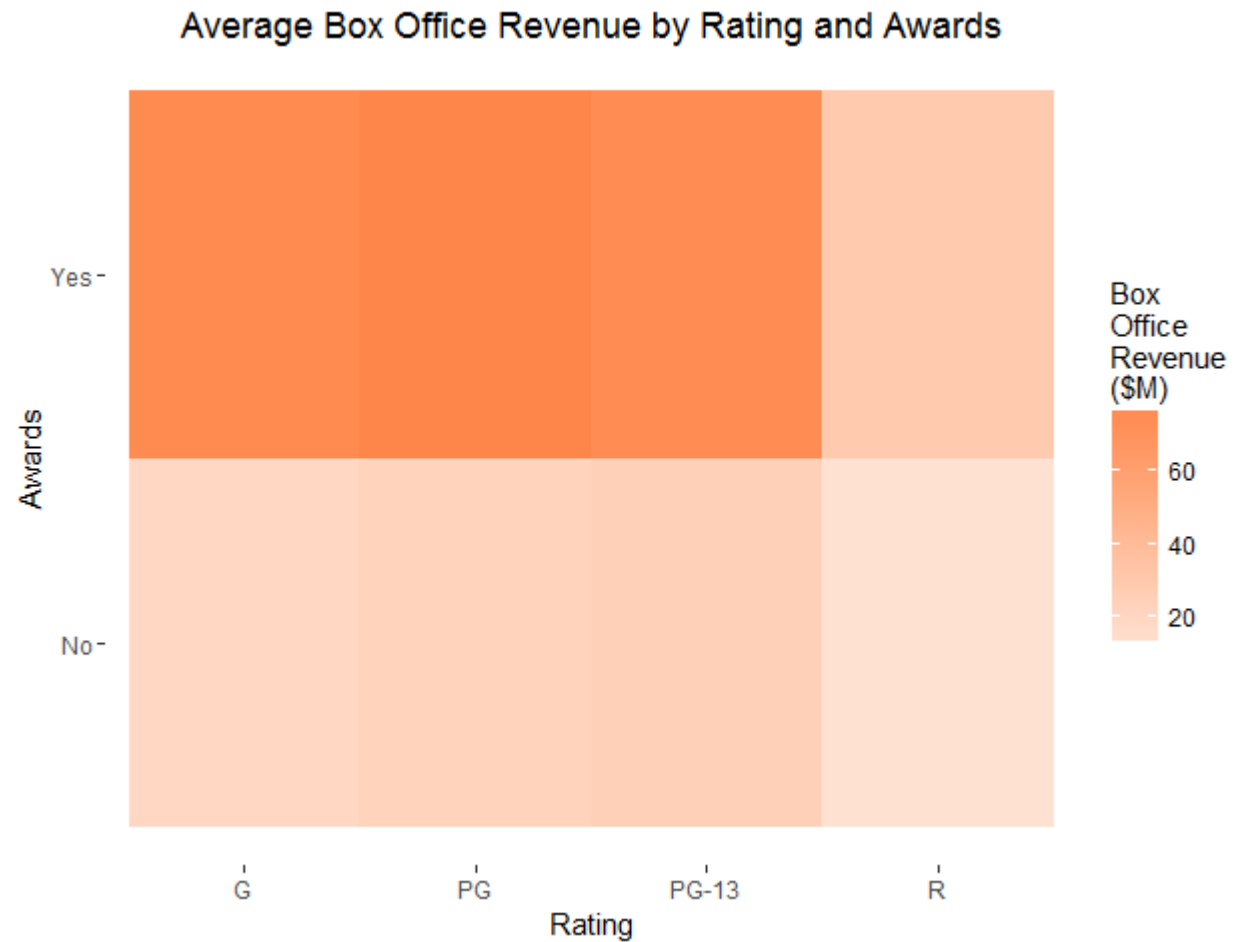
Faceted Bar Chart

Faceted bar plots
Aggregate measure



Stacked Bar Chart

Visual matrix
Color coded cells
Visual patterns

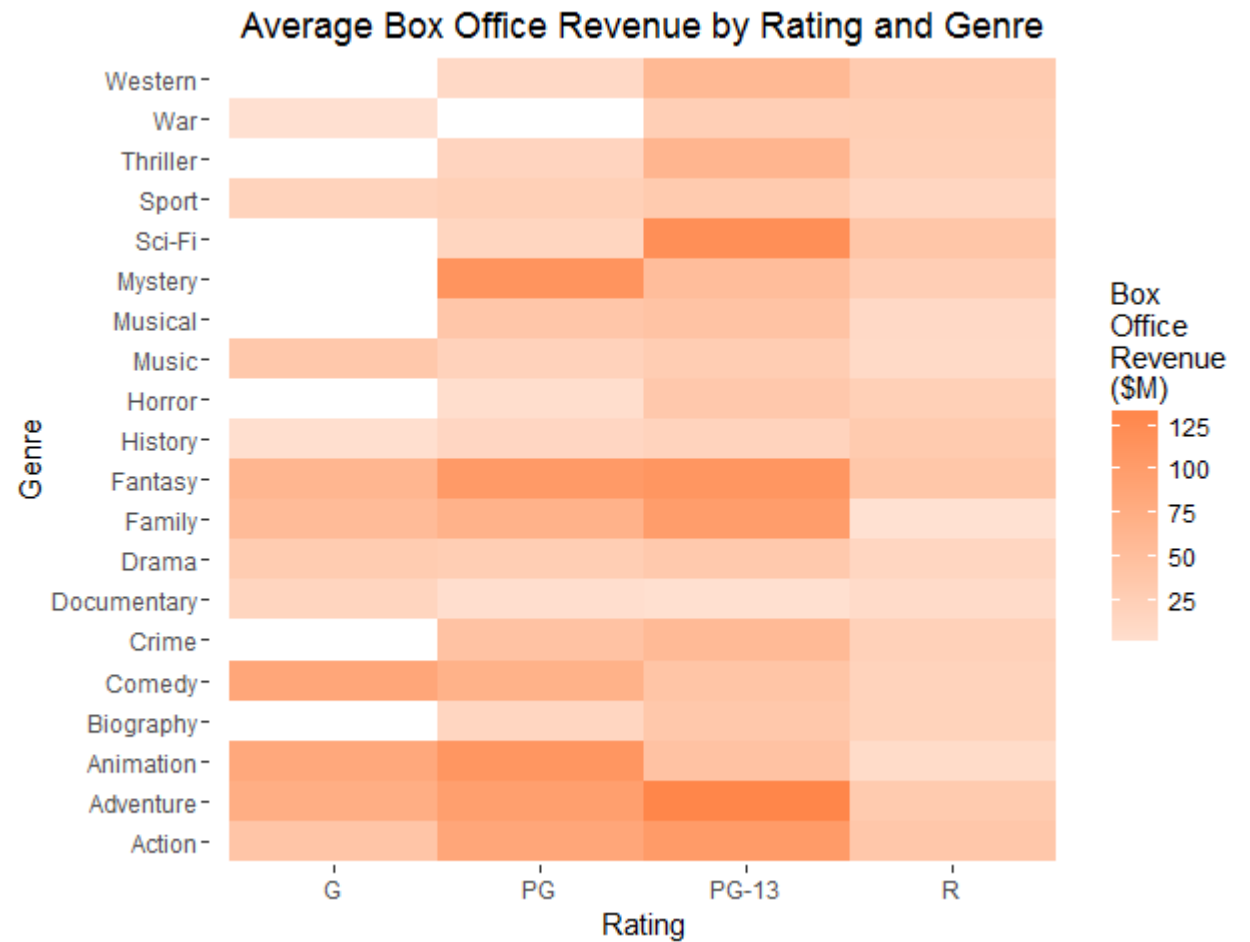


Stacked Bar Chart

Visual matrix

Color coded cells

Visual patterns





1. How does box office revenue compare across award status and rating?
2. Are there any patterns?

Create Row Function



Create Tabular Matrix



Create Grouped Bar Chart



Create a Stacked Bar Chart



Create Faceted Bar Chart



Create Heat Map



Create Row-wise Table



Create Grouped Bar Chart



Create Stacked Bar Chart



Create Faceted Bar Chart



Create Heat Map



Create Grouped Bar Chart



Create Stacked Bar Chart



Create Faceted Bar Chart



Create Heat Map





Summary



Visualizing Two Categorical and One Numeric Variables

Demo (Base)

Demo (Lattice)

Demo (ggplot2)