Visualizing Proportions

Statistics 4868/6610 Data Visualization

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Introduction

Proportion data is grouped by categories, subcategories, and the sample space.

This chapter discusses how to represent the individual categories, but still provides the bigger picture of how each choice relates to the other.

Interactive graphics.

Pie Charts

The whole pie is 100%.

Wedge Angle

Good for small number of categories.

Donut Chart

Same as the pie chart with a whole in the middle.

Arc Length

donut.html

Show the download of the html file and the use of Protovis. Change the data and the labels.

Stacked Bar Graph

stacked-bar.html

Show the download of the html file and the use of Protovis. Change the graph to read President Obama.

Hierachy and Rectangles

Treemap

Baobab

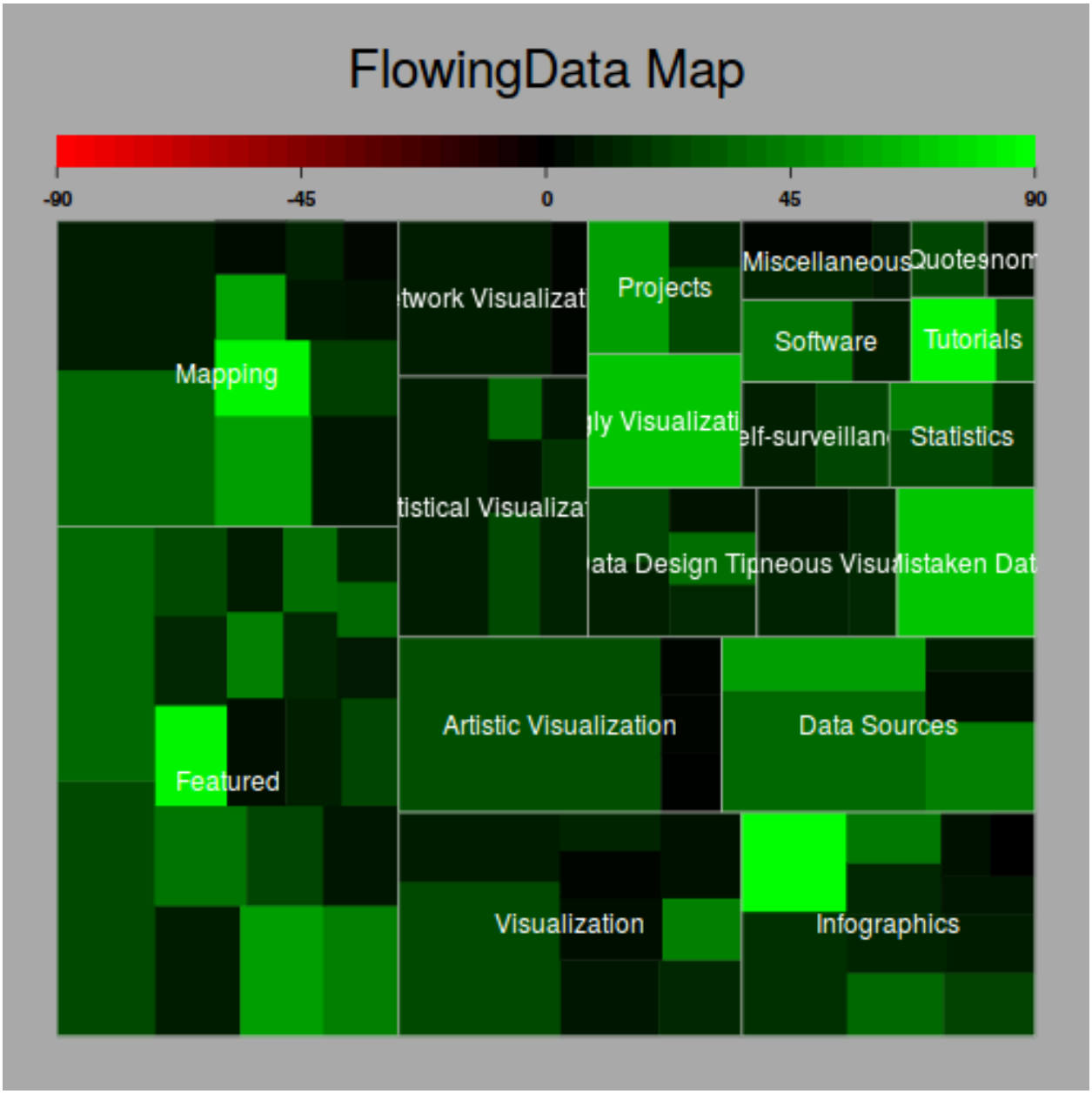
Ringschart

Treemap in R

```
library(portfolio)

posts <- read.csv("http://datasets.flowingdata.com/post-data.txt")

map.market(id=posts$id, area=posts$views, group=posts$category, color=posts$comments, main="FlowingData
```



Proportions over Time

Stacked Area Chart

Author uses Flash and ActionScript

Easy way, Flare

Now Flash Builder

Point-by-Point

One disadvantage to the stacked area graph is that it can be hard to see trends for each group because the placement of each point is affected by the points below it.

So sometime a better way is to plot proportions as a straight time series like in the previous chapter.

Slide With R Code

From the Quick-R website.

Advanced Graphs

Mosaic

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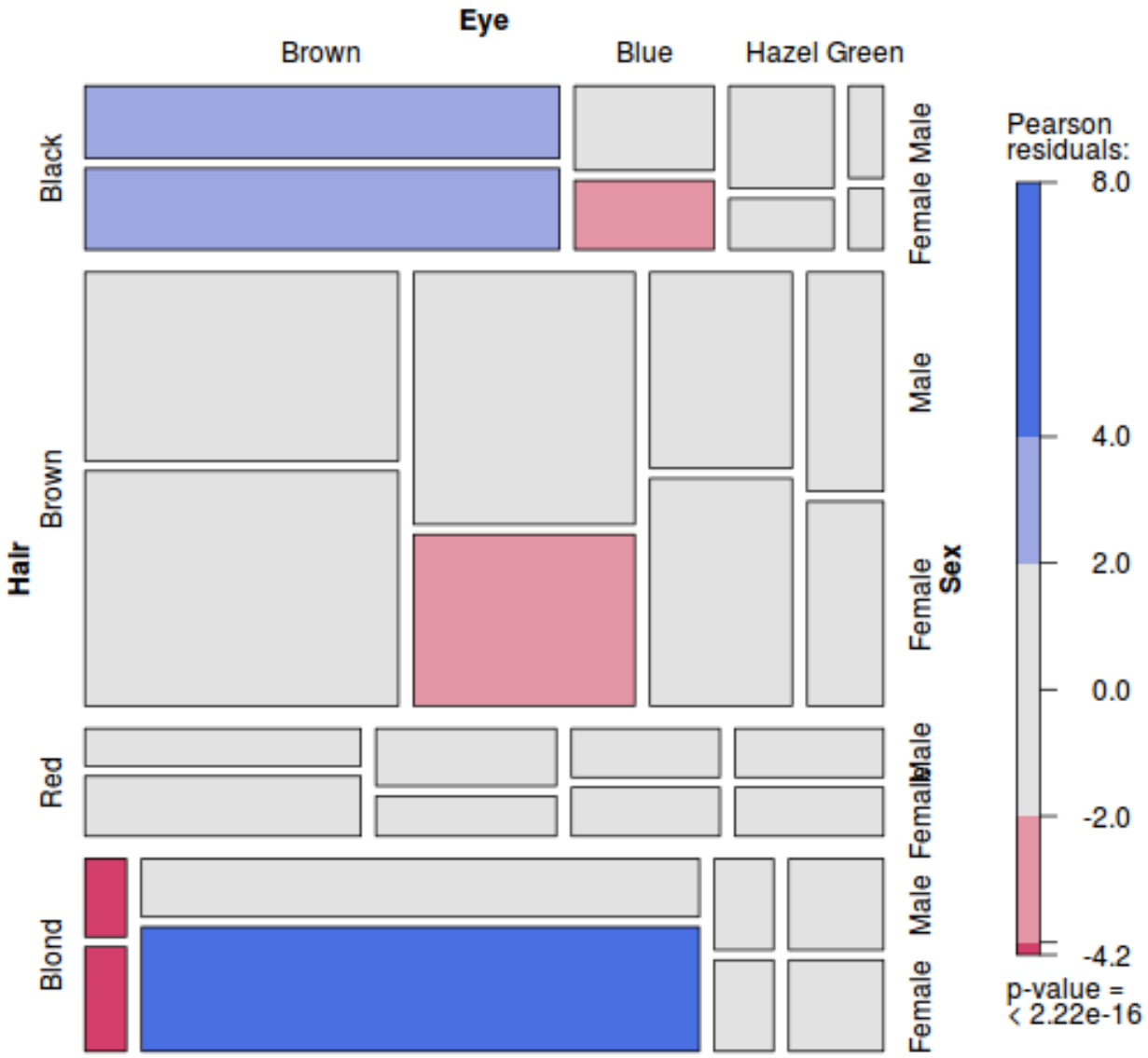
```
# Mosaic Plot Example
library(vcd)
mosaic(HairEyeColor, shade=TRUE, legend=TRUE)
```


Eye
Brown
Blue
Hazel
Green
Hair
Black
Brown
Red
Blond
Sex
Male
Female
Pearson residuals:
8.0
4.0
2.0
0.0
-2.0
-4.2
p-value = < 2.22e-16