13 Wrap-up

36-721 Statistical Graphics and Visualization

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10/15/15

Last time

- Networks and trees

Today

- A few graphs/topics that didn't fit anywhere else
- Wrap-up of the course
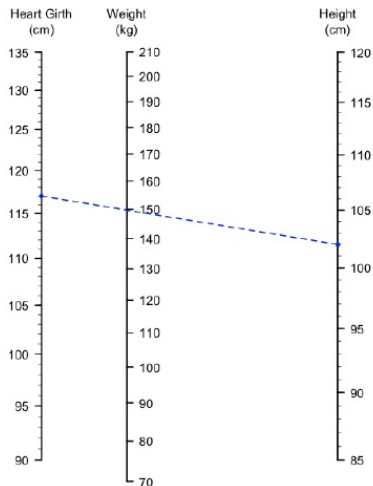
Nomograms

Nomograms show 3+ variables, so that a straight line drawn between two variables tells you value of the third.

Example on next slide by Jonathan Rougier:
in the field and without a calculator, quickly estimate the donkey's weight (hard to measure)
using its height and girth (easy to measure).

Nomograms

Nomogram for our donkeys

Additive corrections:

```
BCS: 1.5,    -11kg
     2,       -6kg
     3.5,    +10kg
     4,      +16kg

Age: <2yo,    -7kg
     5-10yo, +5kg
     >10yo,  +7kg
```
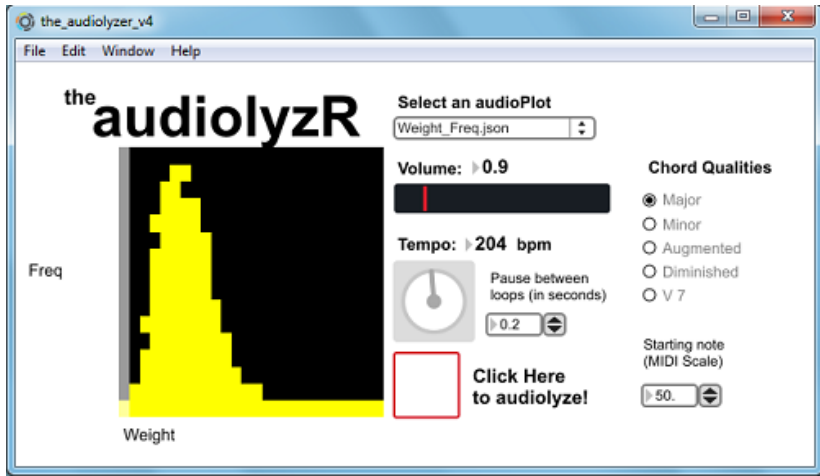
A healthy (BCS 2.5 or 3) 2-5yo donkey with a HeartGirth of 117cm and a Height of 102cm has a predicted weight of about 150kg.

"Data sonification" and audiolyzR

Instead of mapping data to visual variables (position, color, shape...), why not use other senses?

Sound/music: time, pitch, volume, timbre... See audiolyzR demo.
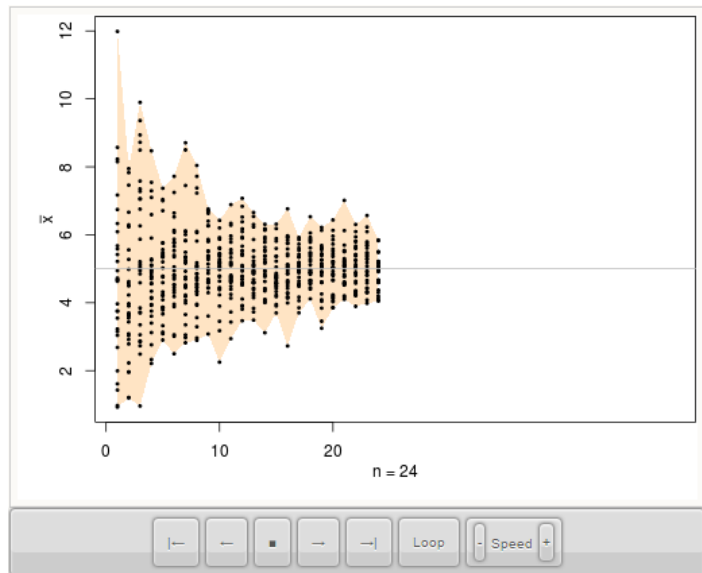
Food: flavors, texture, spiciness... :)

Graffiti (graphiti?)

Dataviz doesn't need to be on paper or computer screens:
see adjustable pie-chart stencil
or create a dataviz in sidewalk chalk

Animation package in R

Create animations as HTML, PDF / LaTeX documents, animated GIFs, etc.

A few last R plots

Follow along in `13_Wrapup_code.R` and `13_Wrapup_code.html`

- `densityLegend`
- `smoothScatter`
- `hexbin`
- `kde2d`, `image`, `contour`
- `tableplot`
- `mosaicplot`

Equivalents in `ggplot2`:

- For `hexbin`, `image`, and `contour`, see RStudio's cheatsheet
- For `mosaicplot`, see `productplots` package and paper

Wrap-up of the course

I hope that you've learned to...

- understand and apply principles of perception, GoG, design, & interaction
- critique graphics you see around you
- create your own effective graphics
- follow new developments in visualization research

...and that you can add proudly your polished class projects to your portfolio or CV.

Remember, graphics like this are out there!
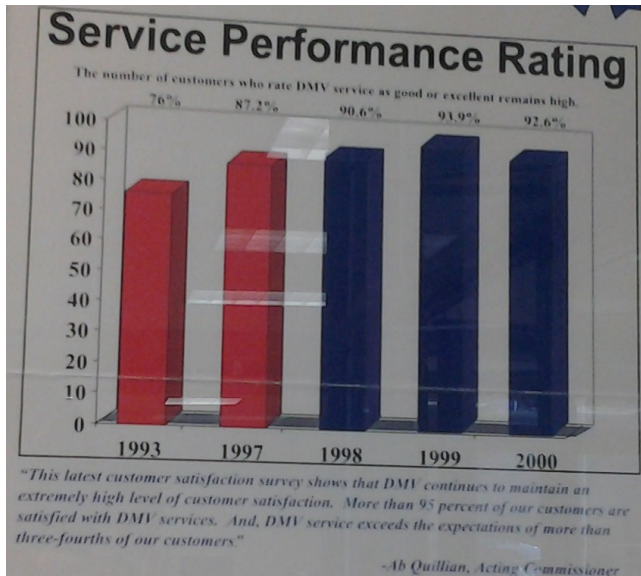
Remaining dates

- Sat 10/17: Project 3 (Research) due 5pm
- Tues 10/20, Thurs 10/22: extra office hours during class time
- Sat 10/24: final resubmissions due 5pm