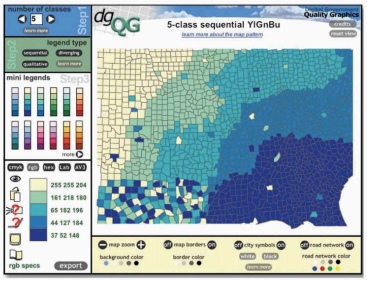
Color Experimentation

Today's Class

- This Week's Readings
- In-class discussion of homework
- Assignment #9: Final Project Progress Report (or color work)
- Next Week's Readings

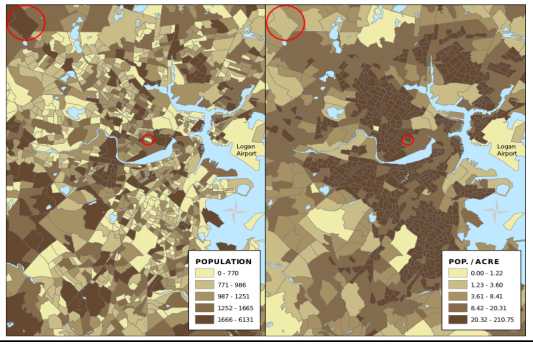
Readings for This Week:

- "ColorBrewer.org: An Online Tool for Selecting Colour Schemes for Maps", Harrower & Brewer, The Cartographic Journal



Choropleth map: statistics per area
must be careful about normalization

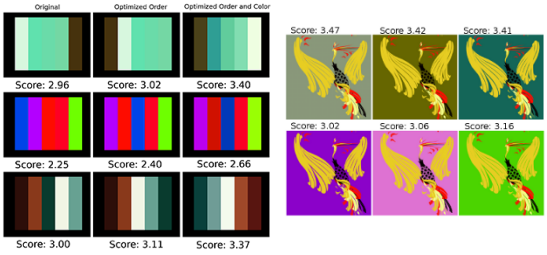
Total Population of 2000 Census Block Groups Population Density of 2000 Census Block Groups



- Color selection is not one size fits all
  - don't always use the same color theme
  - don't always use the default
- Many options in map making programs
  - No guidance about choosing color schemes
  - Don't tell them what to do, but allow them to explore options
- Standard (cartographic) conventions
  - Variations in lightness are interpreted as ordering
  - Dark equals more, light equals smaller values
  - No more than 7 colors in a choropleth map (Legibility vs. information rich tradeoff)
- Just because you can see differences doesn't mean you can correlate color back to legend
- Important to consider borders & backgrounds

Readings for This Week:

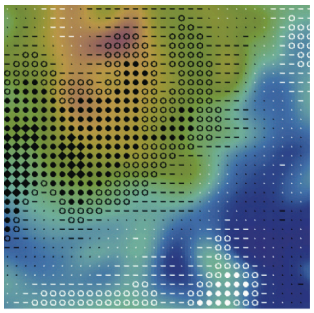
- "Color Compatibility From Large Datasets", O'Donovan, Agarwala, & Hertzmann, SIGGRAPH



- Motivation: graphic design (not directly visualization)
  - Test theories of human color preferences
- Large study of human preference
  - more colors, bigger sets, more users than past studies
- Color preference can have cultural ties or other personal variations
- Exploratory determination of important features for color compatibility
  - Machine learning
  - training vs. test datasets
- Non experts (MTurk) vs experts (Kuler)
  - Remove inconsistent users
- Discovered general yellow-blue preference
  - is that a color blindness compensation?
- User preference, clustering by preference agreement
- Search for nearby theme with highest predicted rating

Readings for This Week:

- Colin Ware, "Quantitative Texton Sequences for Legible Bivariate Maps," *IEEE Transactions on Visualization and Computer Graphics*, 2009.



Gestalt / Mach bands

Munsell Color

Mechanical Turk

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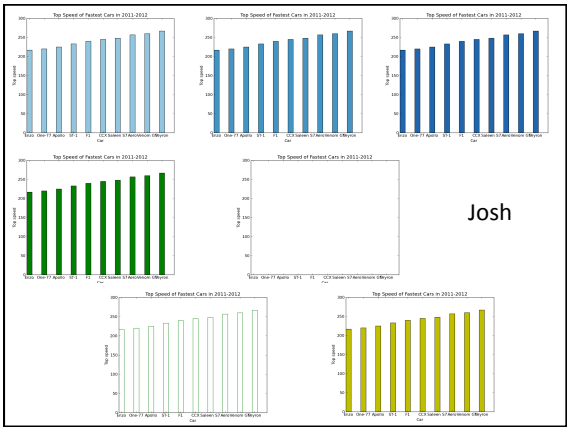
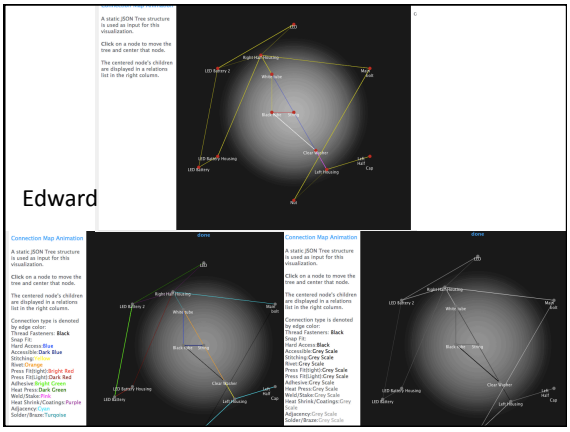
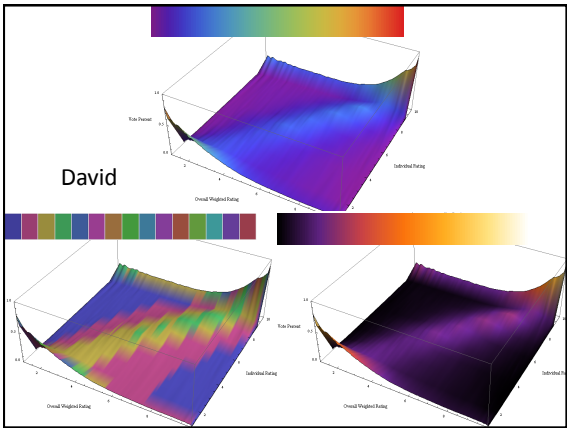
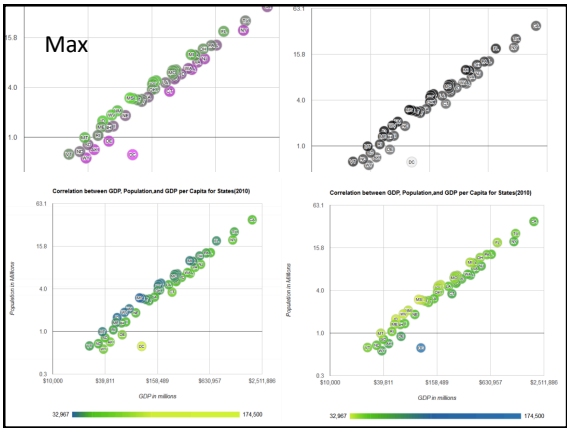
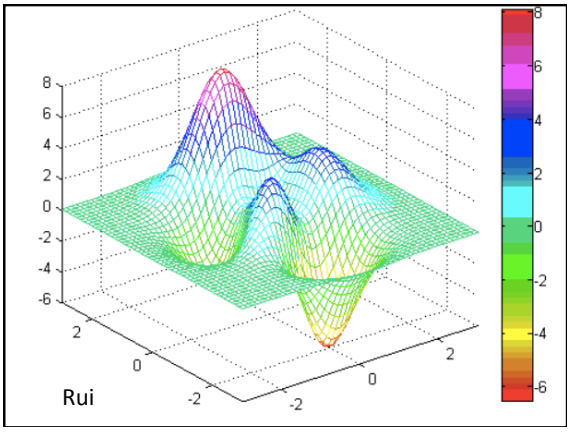

Josh

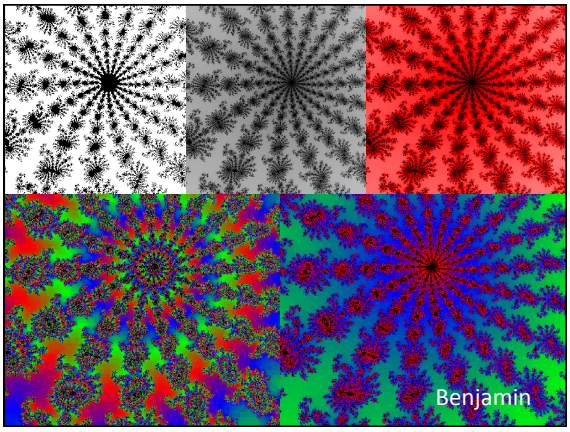

Edward

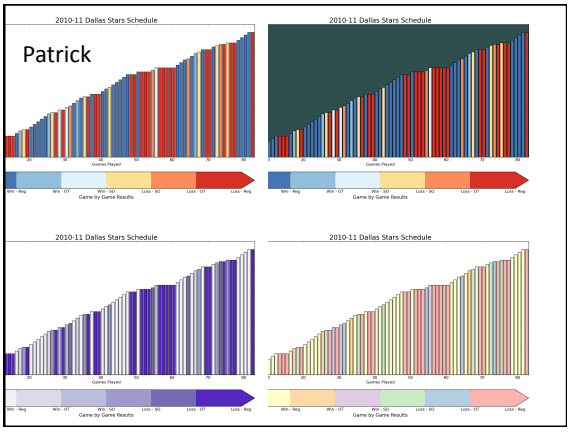

David


Max


Ziv &
Ryan


Rui


Benjamin


Patrick
2010-11 Dallas Stars Schedule
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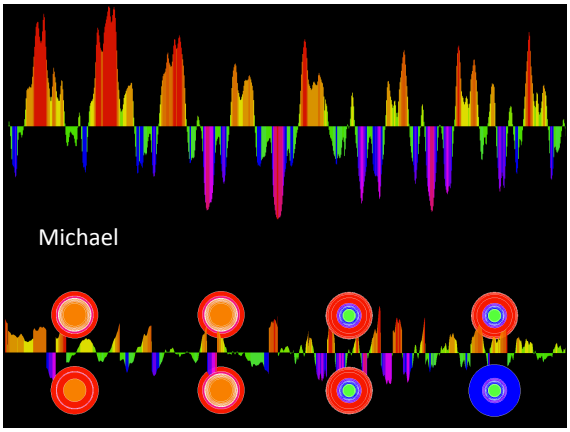
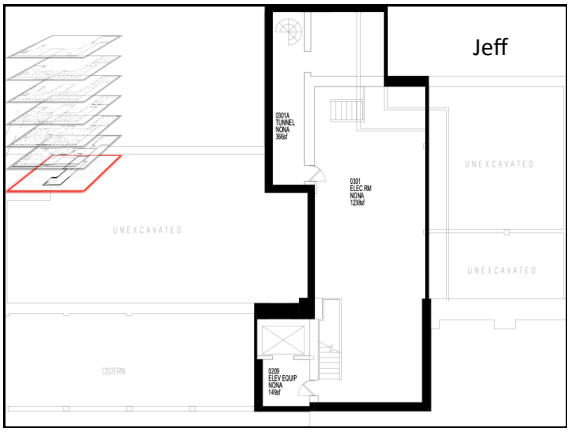

Michael


Jeff
UNEXCAVATED
UNEXCAVATED
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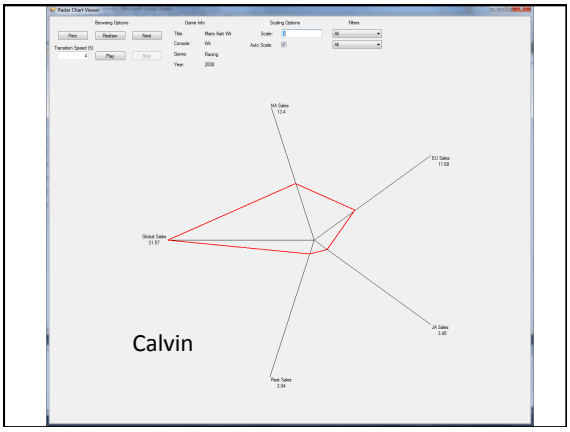
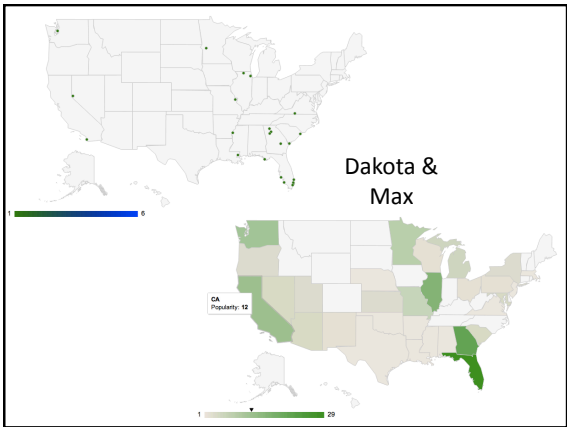
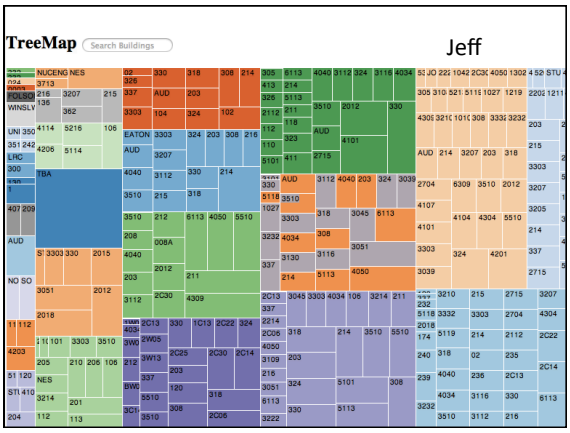
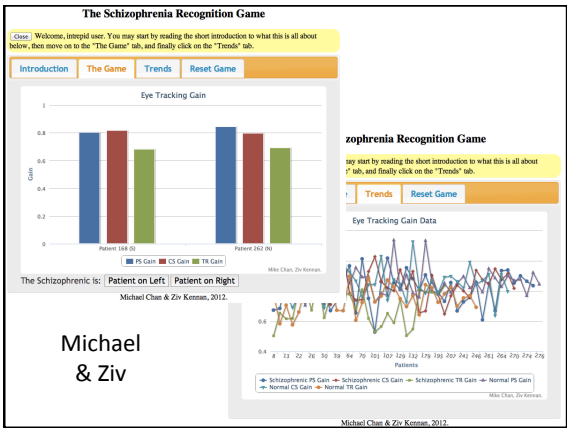
CISTERN


Calvin

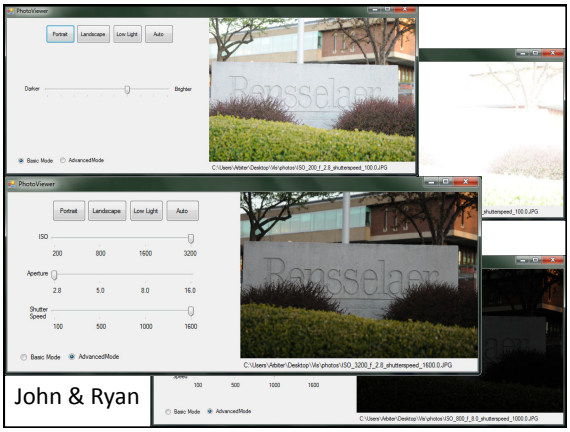

Dakota &
Max
CA
Popularity: 12



Jeff



Michael & Ziv



John & Ryan

Today's Class

- This Week's Readings
- In-class discussion of homework
- Assignment #9: Final Project Progress Report (or color work)
- Next Week's Readings

- Week of April 2nd
  - Assignment 8: Experimenting with Color [motivation & problem definition & visualization design & visualization revision]
- Week of April 9th
  - Assignment 9: Final Project Progress Report [data collection / visualization execution]
- Week of April 16th
  - Assignment 10: User Feedback [analysis & visualization revision]
- Tuesday April 24th: Final Project Due [presentation]
- Wednesday April 25th & Wednesday May 2nd: Final Project Presentations [presentation]

Homework Assignment 9: Progress Report

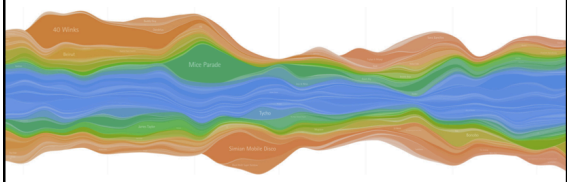
Final Project week # 2

Today's Class

- This Week's Readings
- In-class discussion of homework
- Assignment #9: Final Project Progress Report (or color work)
- Next Week's Readings

Readings for Next Week:

- "Stacked Graphs – Geometry & Aesthetics" Lee Byron & Martin Wattenberg, IEEE TVCG 2008



- or… YOUR CHOICE!