Course Review

CS 7450 - Information Visualization
November 30, 2015
John Stasko

Promising Trends

• Built-in best practices
  – Banking to 45°, Tableau’s guidance
• Integrated support for geo-spatial analysis
  – Learn from cartographers, Google maps
• Integrated support for network analysis
  – Vizster, Social Action, Ploceus
• Integrated support for collaborative analysis
  – Many Eyes, sense.us
Promising Trends

- Custom analytical applications
  - Spotfire, Qlikview
- Illuminating predictive models
  - Risk, uncertainty, opening the black box
- Integrated data mining
  - Friend not foe
- Improved HCI devices
  - Large, multi-touch displays

Visualization Zoo

Time series data
- Index line chart
- Stacked graph
- Small multiples
- Horizon graph

Statistical distributions
- Stem-and-leaf plots
- Q-Q plots
- Scatter plot matrix
- Parallel coordinates

Hierarchies
- Node-link diagrams
  - Cartesian
  - Radial (dendogram)
  - Indented tree layout
- Adjacency diagrams
  - Icicle plot
  - SunBurst
- Enclosure diagrams
  - Treemap
  - Circle packing

Maps
- Flow map
- Choropleth map
- Graduated symbol map
- Cartograms

Networks
- Force-directed
- Arc diagram
- Matrix views

Heer, Bostock & Ogievetsky
CACM ’10

http://queue.acm.org/detail.cfm?id=1805128
Syllabus Review

Overview

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<th>Week</th>
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<td>Aug 17, 19</td>
<td>Introduction</td>
<td>InfoVis overview</td>
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<td>Aug 24, 28</td>
<td>Multivariate data &amp; table/graph design</td>
<td>S. Few's design guidance</td>
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<td>Aug 31, Sep 2</td>
<td>Multivariate visual representations</td>
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<td>Sep 7, 9</td>
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<td>Vis programming tutorial</td>
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<td>Sep 14, 16</td>
<td>InfoVis systems &amp; toolkits</td>
<td>Commercial systems demos</td>
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<td>Sep 21, 23</td>
<td>Interaction</td>
<td>Overview &amp; detail</td>
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<td>Sep 28, 30</td>
<td>Tasks and analysis</td>
<td>Storytelling</td>
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<td>Oct 5, 7</td>
<td>Poster session</td>
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<td>Oct 12, 14</td>
<td>No Class - Fall break</td>
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<td>Oct 19, 21</td>
<td>Text &amp; documents 1</td>
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<td>Value of visualization (Video)</td>
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<td>Nov 9, 11</td>
<td>Graphs and networks 1</td>
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<td>Visual analytics</td>
<td>Visual perception</td>
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<td>Nov 23, 25</td>
<td>Evaluation</td>
<td>No Class - Thanksgiving break</td>
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<td>Nov 30, Dec 2</td>
<td>Review</td>
<td>Exam</td>
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Exam

- Wednesday’s class
- Short answer (~20 questions)
  - Explain something
  - Identify something
  - Critique something
  - Design something
  - ...
- Some sample questions
HW 7

- Investigative analysis
- The hidden plot
- Discuss process & your thoughts
- Jigsaw suggestions

Class - Your Reflections

- What were most interesting topics?
- What are key research challenges?
- What should be done in the future?
Final Project

- Demos next Mon-Tue at the Vis Lab (near my office)
  - 20 minutes per session, be on time
  - Sign-ups
  - Show for a little, let us try for a little
  - **Important**: Bring 3 copies of a summary sheet - member names, paragraph overview, image

- Final exam slot video session on Wednesday @ 2:50pm
  - Room TBA
  - Show your video, then answer questions
  - Give me the file (thumbdrive, web, ...) by noon that day
  - Tips (next slide)

- Questions?

Video Advice

- Use Camtasia
- Process
  - 1. Develop script (rehearse timing)
  - 2. Record script
  - 3. Capture video of demo to script
  - 4. Add effects

- You’ve seen examples all semester
  - eg, [http://www.cc.gatech.edu/gvu/ii/videos.html](http://www.cc.gatech.edu/gvu/ii/videos.html)
Team Survey/Self-Assessment

• Coming soon
• Sheet or SurveyMonkey
• Only I will read these

Grades

• Components
  – HWs
  – Project
  – Participation
  – Final exam

• Items will be posted in t-square later next week

• Calculation
Course Survey

• Take a few minutes to complete CIOS/TAOS
  – Info: http://www.cetl.gatech.edu/cios
  – Surveys: http://gatech.smartevals.com
    (and from t-square homepage)

Potential Projects

• If you’re interested in pursuing research in this area, let me know
  – ...
InfoVis Gospel

• Hopefully, course has increased your awareness of topic and you can become an advocate

• Keep me posted as your use these ideas in your career