Information Visualization

Intro
Tamara Munzner
Department of Computer Science
University of British Columbia

http://www.cs.ubc.ca/~tmm/courses/infovis/presentations.html
http://www.cs.ubc.ca/~tmm/courses/infovis/structure.html

Class time
• weeks 1-9: Participation [30%]
  –before class:
    • you read chapter, sometimes also paper
  –submits comments before class
  –during class:
    • sometimes I lecture briefly and we discuss
    • sometimes in-class group work
  –finals (Thursday) (possible that class cancelled)

• weeks 10-13: Presentations [20%]
  –before one of the classes you each read paper on topic of your choice
  –during that class you present it to everybody else (~10 min)

Next Time
• to read
  –VAD book, Ch. 1: What’s Vis, and Why Do It!
  –VAD book, Ch. 2: What: Data Abstraction

Readings
• textbook
  –Tamara Munzner Visualization Analysis and Design. AK Peters Visualization Series.
  –http://www.akpeters.com
  –library has multiple ebook copies
• papers
  –link posted on course page
• DL links, use library EZproxy from off campus
• readings posted by one week before class
• each session: always one chapter, sometimes one more paper

Now: In-class design exercise, in small groups
• Five time-series scenarios
  –A: office hours Tues right after class (5-6pm)
  –B: every 5 min, 1 year, 2 things: currency values (exchange rate)
  –C: several years and several things: 5 years, 10 currencies
  –D: 1 year, many things: CPU load across 1000 machines
  –E: 1 year, several parameters, many things: 10 parameters on each of 1000 machines
• Small-group exercise: 15-20 min
  –one group per table (4-5 people/group)
  –discuss/choose possible visual encodings appropriate for your assigned scenario
• Reportback: 20-30 min
  –3 min from each group

Design space examples/discussion: 15-20 min

Projects
• design studies: BYOD (Bring Your Own Data)
  –you have your own data to analyze
  –your thesis/research topic (very common case)
  –devised with another course (sometimes possible but timing can be difficult)
  –FDI (Find Data Of Interest)
  –many existing datasets, use resource page to get started
  –http://www.cs.ubc.ca/~tmm/courses/infovis/resources.html

• last several weeks of class
  • present, analyze, and critique one paper
  • send me topic choices by Feb 17
  • I will assign papers accordingly

• presentation
  –slides required
  –summary/description important, but also your own thoughts
  –analysis according to book framework
  –critique of strengths and weaknesses

• timing
  –exact times TBD depending on enrollment
  –likely around 10 minutes each

• topics at http://www.cs.ubc.ca/~tmm/courses/infovis/presentations.html

Audience
• no prerequisites
  –many areas helpful but not required
  –human-computer interaction, computer graphics, cognitive psychology, graphic design.
  –algorithms, machine learning, statistics...
• open to non-CS people
  –no programming background, can do analysis or survey project
• open to advanced undergrads
  –talk to me
• open to informal auditors
  –some on all days of readings/discussion, as you like
  –you’ll get out of it what you put into it...

Finding me
• email is the best way to reach me: tmm@cs.ubc.ca
• office hours Tues right after class (5-6pm)
  –by appointment
• X661 (X-Wing of IICS/CS bldg)
• course page is font of all information
  –don’t forget to refresh, frequent updates
  –http://www.cs.ubc.ca/~tmm/courses/547-17

Participation [30%]
• written comments on reading in advance (18% of total mark)
  –due 10:30pm 2 hrs before class
  –I do less formal than written report
  –correct grammar and spelling will still be expected
  –be concise, a few sentences is good, one paragraph max!
• should be thoughtful, show you’ve read and reflected
• sometimes I email a hint or tip to look up
• ask to see clarification of confusing section
• good to show that you’re thinking carefully about what you read
• great to point out something that I haven’t seen before
• examples on http://www.cs.ubc.ca/~tmm/courses/infovis/structure.html

Reading comments
• comments or questions
  –due 10:30pm before class
  –builds on previous week’s reading
  –correct grammar and spelling will still be expected
  –be concise, a few sentences is good, one paragraph max!

Presentations [20%]
• project presentations
  –50% Project
  –2% Pitches
  –1% Proposal
  –4% Literature Surveys
  –4% Project Peer Reviews
  –1% Final Presentation
  –1% Course
  –25% Presentations
  –75% Content Summary 50% Analysis 25% Critique 25%
  –25% Delivery/Presentation Style 50% Slide Quality 50%
  –10% Participation
  –4% Written Questions
  –4% In-Class Discussion/Exercises

Marking
• marking by buckets
  –great 89%
  –good 78%
  –ok 67%
  –poor 46%
  –zero 0%

Course goals
• twofold goals
  –general: teach you how to be a better researcher
  –generic: teach you how to be a better researcher
• feedback through detailed written comments on writing and presenting
  –both content and style
  –at level of paper review for your final project
  –goal within a week or so

• fast marking for reading questions
  –great/good/ok/poor/zero
  –goal turn around before next class
• one week at most

Projects
• programming
  –common case
  –note that I will only consider supervising students who do programming projects
  –three types
  –problem-driven design studies (target specific task/issue)
  –technique-driven (explore design choices for encoding or interactive idiom)
  –algorithm implementation (as described in previous paper)
• analysis
  –use existing tools on dataset
  –detailed domain survey
  –particularly suitable for non-CS students
• survey
  –very detailed domain survey
  –particularly suitable for non-CS students

Marking
• marking by buckets
  –great 89%
  –good 78%
  –ok 67%
  –poor 46%
  –zero 0%

Course goals
• twofold goals
  –specific: teach you something new
  –generic: teach you how to be a better researcher
• feedback through detailed written comments on writing and presenting
  –both content and style
  –at level of paper review for your final project
  –goal within a week or so

• fast marking for reading questions
  –great/good/ok/poor/zero
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