Vis, The Next Generation: Teaching Across the Researcher-Practitioner Gap

Tamara Munzner
Department of Computer Science
University of British Columbia

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http://www.cs.ubc.ca/~tmm/talks.html#vis15teach
• Perspectives on Teaching Data Visualization
  – Jason Dykes, Daniel F. Keefe, Gordon Kindlmann, Alark Joshi, me
  – I’ll aim for minimal repetition!

• structure
  – within CS dept (75%), but other students welcome (25%)
  – first 8 weeks: reading pre class & lecture/discussion in class
  – last 4 weeks: presentations in class
    • they pick topic, I assign paper they read & present to rest of class
  – last 5+2 weeks: projects, outside class
    • choices: design study, technique, implementation, analysis, survey
      – last 2 possible for non-programmers
    • structure: pitches, meetings, proposal, update, final present, final report
  – heavily weighted to research over practice
What’s new

• textbook finished!
  – theoretical foundations & core content under control
  – reading for each lecture: one chapter and one research paper

• enrollment higher: from avg 15 to almost 30

• presentations
  – earlier: I gave several choices, they picked a few, lots of overlap between years
  – now: I assign one brand new paper from VIS (preprints online in time!)

• new pilot module in Journalism
  – 12 journalism grads, non-programmers
  – half the time, half the credits
  – no reading, teach (some of) book material through lecture
  – Tableau assignment: mix of tutorial and open ended
Active vs passive learning

- some active flavor
  - pre-class readings, checked by submitting questions/comments just before class
    - marked later
  - during class: less lecture, more questions/discussion
    - pitfall: still not enough in-class design exercises, just one near term start
      - if I do more, when is there time to discuss? do they need it?!
    - pitfall: discussion playing field not level
      - ESL vs native speakers, shy/reserved vs outgoing, novices vs practiced
        » small set of people doing lots of the talking
      - over 50% of participation grade on Qs to avoid penalizing
        » I’m still not satisfied
Rapid rise of new tools

• CS class
  – agnostic, since it’s up to them to choose tools
  – shakeout to a few dominant tools simplifies recommendation
    • D3, R, Tableau now top of heap
  – real answer: rely on wisdom of students in my group to stay current
    • main regret of professor life is that I don’t code any more
    • thanks to Matt Brehmer for his fantastic resource list
      http://www.cs.ubc.ca/group/infovis/resources.shtml

• journalism class
  – I learned Tableau along with them this fall
    • hat tip to Robert!
    • a more brutal learning curve than I anticipated...
More Information

• this talk
  http://www.cs.ubc.ca/~tmm/talks.html#vis15teach

• course pages
  – http://www.cs.ubc.ca/~tmm/courses/547-15
  – http://www.cs.ubc.ca/~tmm/courses/journ15

• book page
  http://www.cs.ubc.ca/~tmm/vadbook