### Readings Covered

- Multi-scale Scatterplot. Yves Chiricota, Fabien Jourdan, Guy Melancon. Proc. InfoVis 05
- FilmFinder

### Critique

- clear successes
  - fast, lightweight visual queries
  - details on demand
  - easy to use for novices
- more arguable: alphasliders
- other techniques: data vis sliders, fisheye menus, speed-dependent automatic zooming

### Scatterplots

- encode two input variables with spatial position
- show positive/negative/no correlation between variables

### Metric-Based Exploration: Software Engr

- linked views for metric-based exploration
  - graph view
  - axis 1: strength metric (topological graph structure)
  - axis 2: software eng metric (public methods)

### Metric-Based Exploration: IMDB

- axis 1: centrality, for locating cliques
  - axis 2: node degree, for size of clique
  - axis 2: clustering index

### SPLOM: Scatterplot Matrix

- show all pairwise variable combos side by side
- matrix size grows quadratically with variable count

### Graph-Theoretic Scagnostics

- reduce problem to constant size
  - overview matrix of 9 geometric metrics
  - meta-SPLOM: each point represents scatterplot
  - detail on demand to see individual scatterplots

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**Lecture 7: Statistical Graphics**

Information Visualization

CPSC 533C, Fall 2007

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UBC Computer Science

1 October 2007

**FilmFinder**


**Critique**

- interesting followup to Wattenberg paper
- exploiting perceptual mechanisms
- suitable for intermediate/expert analysis
- abstraction might be difficult for novice use

**SPLOM: Scatterplot Matrix**

- show all pairwise variable combos side by side
- matrix size grows quadratically with variable count

**Graph-Theoretic Scagnostics**

- reduce problem to constant size
  - overview matrix of 9 geometric metrics
  - meta-SPLOM: each point represents scatterplot
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Partial Residuals
- fixed dataset, Morris data switched
- explicitly show differences
  - take means into account
  - line is 10% trimmed mean (toss outliers)

Critique
- very powerful and elegant method
- curse of dimensionality is hard problem
- abstraction level clearly appropriate for experts

Choosing Aspect Ratios
- FFT the data, smooth by convolve with Gaussian
- find interesting spikes/ranges in power spectrum
- cull nearby regions if too similar, ensure overview shown
- create trend curves for each aspect ratio

Presentation Topics Due Oct 19
- pick three topics that you want
  - optional: veto one of the three days
  - Nov 5 or Nov 7 or Nov 19
- send me email by Oct 19
  - Subject: 533 submit topics