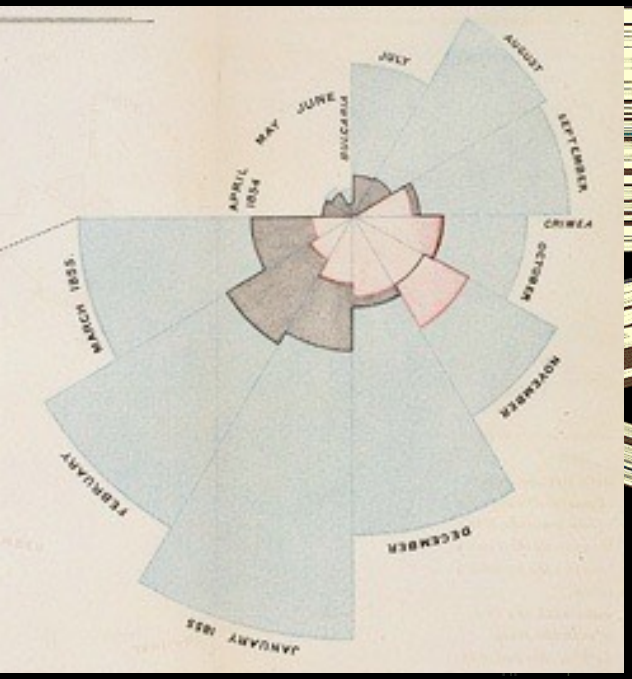
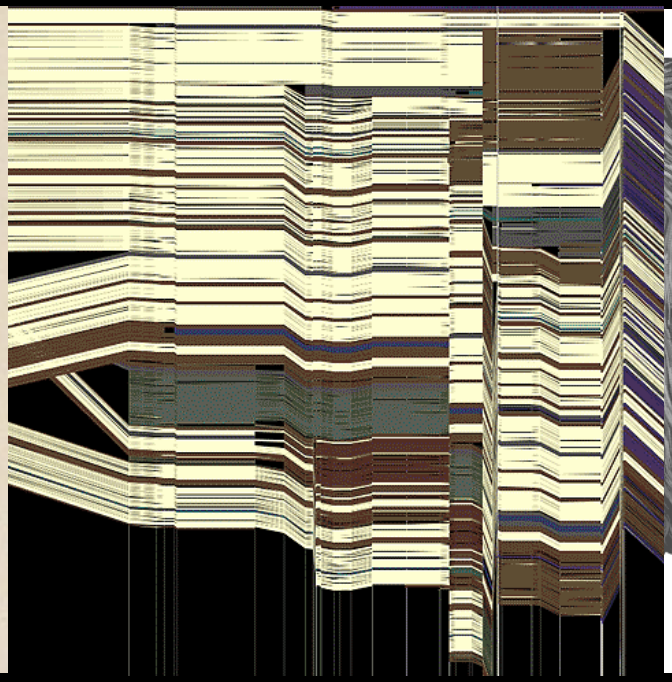
CSE 442 - Data Visualization

Design Review & Critique





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Prototype
Peer Critiques

Critique Questions

What is the purpose of the visualization?
Does it serve its purpose well?
Does it convey the data honestly?
Does it show the appropriate level of detail?
Are expressive & effective visual encodings used?
Do the interactions aid understanding of the data?
Is the design well-organized? Is it innovative?
What would like to change or refine?
How might things be done differently?

I Like… / I Wish… / What If?

I LIKE…

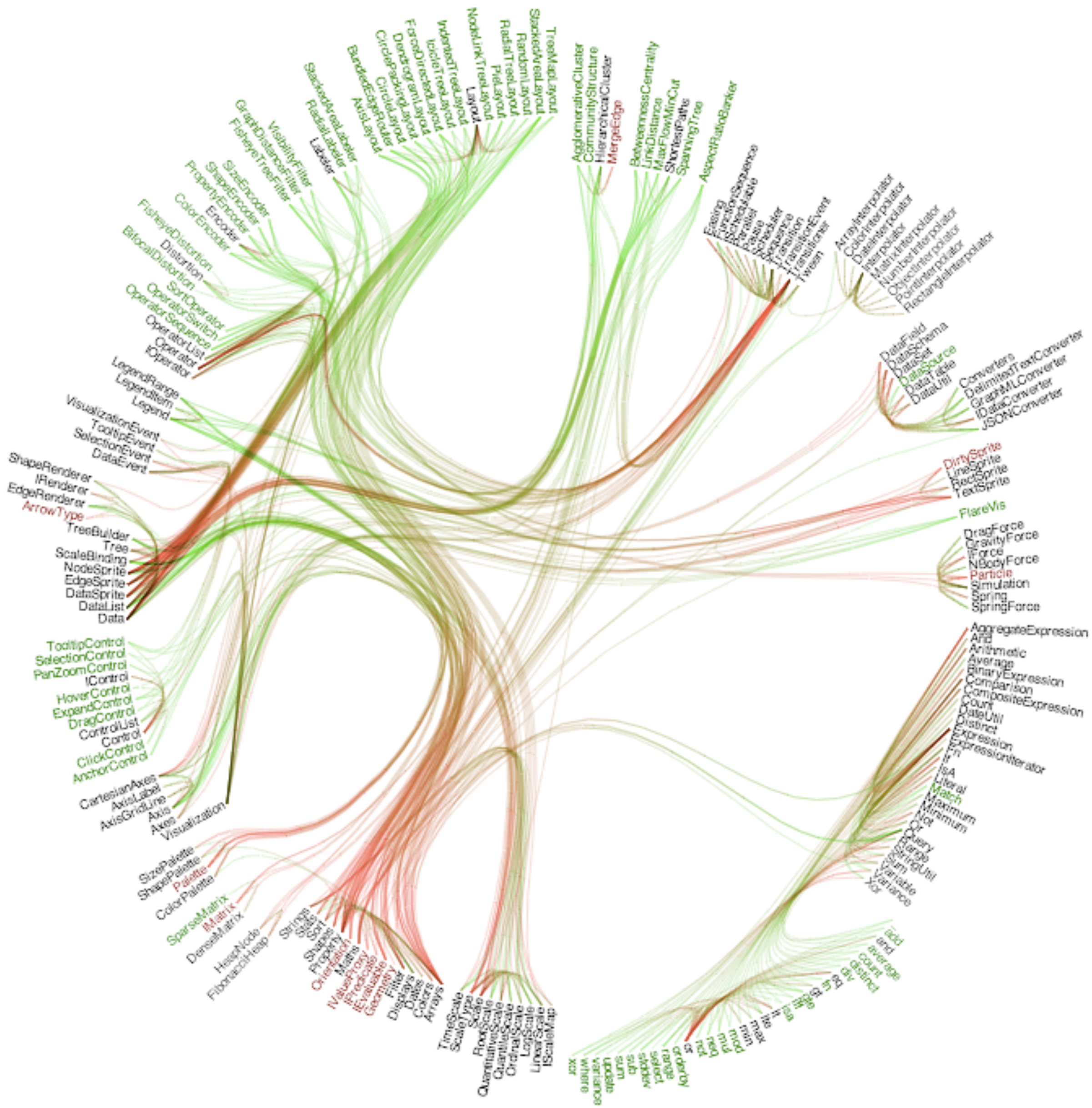
Praise for design ideas and/or well-executed implementation details. *Example: "I like the navigation through time via the slider; the patterns observed as one moves forward are compelling!"*

I WISH…

Constructive statements on how the design might be improved or further refined. *Example: "I wish moving the slider caused the visualization to update immediately, rather than the current lag."*

WHAT IF?

Suggest alternative design directions, or even wacky half-baked ideas. *Example: "What if we got rid of the slider and enabled direct manipulation navigation by dragging data points directly?"*



TreeMapLayout
StackedAreaLayout
RandomLayout
RadialTreeLayout
PieLayout
NodeLinkTreeLayout
Layout
IndentedTreeLayout
IcicleTreeLayout
ForceDirectedLayout
DendrogramLayout
CirclePackingLayout
CircleLayout
BundledEdgeRouter
AxisLayout
StackedAreaLabeler
RadialLabeler
Labeler
VisibilityFilter
GraphDistanceFilter
FisheyeTreeFilter
SizeEncoder
ShapeEncoder
PropertyEncoder
Encoder
ColorEncoder
FisheyeDistortion
Distortion
BifocalDistortion
SortOperator
OperatorSwitch
OperatorSequence
OperatorList
Operator
IOperator
LegendRange
LegendItem
Legend
VisualizationEvent
TooltipEvent
SelectionEvent
DataEvent
ShapeRenderer
IRenderer
EdgeRenderer
ArrowType
TreeBuilder
Tree
ScaleBinding
NodeSprite
EdgeSprite
DataSprite
DataList
Data
TooltipControl
SelectionControl
PanZoomControl
IControl
HoverControl
ExpandControl
DragControl
ControlList
Control
ClickControl
AnchorControl
CartesianAxes
AxisLabel
AxisGridLine
Axis
Axes
Visualization
SizePalette
ShapePalette
Palette
ColorPalette
SparseMatrix
IMatrix
DenseMatrix
HeapNode
FibonacciHeap
TimeScale
ScaleType
Scale
RootScale
QuantitativeScale
QuantileScale
OrdinalScale
LogScale
LinearScale
IScaleMap
AgglomerativeCluster
CommunityStructure
HierarchicalCluster
MergeEdge
BetweennessCentrality
LinkDistance
MaxFlowMinCut
ShortestPaths
SpanningTree
AspectRatioBanker
ArrayInterpolator
ColorInterpolator
DateInterpolator
Interpolator
MatrixInterpolator
NumberInterpolator
ObjectInterpolator
PointInterpolator
RectangleInterpolator
DataField
DataSchema
DataSet
DataSource
DataTable
DataUtil
Converters
DelimitedTextConverter
GraphMLConverter
IDataConverter
JSONConverter
DirtySprite
LineSprite
RectSprite
TextSprite
FlareVis
DragForce
GravityForce
IForce
NBodyForce
Particle
Simulation
Spring
SpringForce
AggregateExpression
And
Arithmetic
Average
BinaryExpression
Comparison
CompositeExpression
Count
DateUtil
Distinct
Expression
ExpressionIterator

I Like… / I Wish… / What If?

I LIKE…

The goal of supporting developers to improve decoupling.
The “cut-line” interaction to isolate links of interest.
The use of gradients to show edge directionality.

I WISH…

I could author multiple cut-lines for compound queries.
More details on demand were shown upon mouse-hover.

WHAT IF?

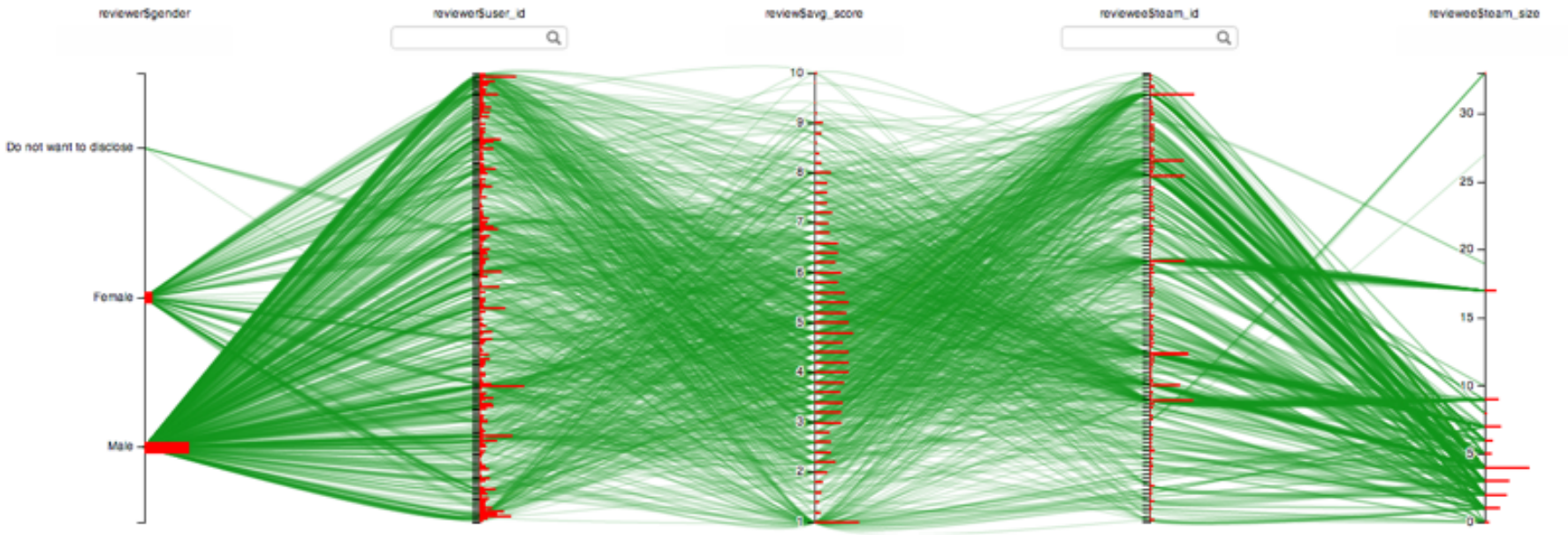
You could incorporate information from applications that use this code? How often are different modules used?

Exploring Peer Evaluation on Venture-Lab Spring 2012 | 1. Select Axes | 2. Filter | About | Showing 1206 row(s)(s)

REVIEWER ☐ gpa ☐ academic_major ☐ age_range ☐ location ☑ gender ☐ signin_count ☑ user_id

REVIEW ☑ avg_score ☐ score1 ☐ score2 ☐ score3 ☐ score4 ☐ score5

REVIEWEE ☑ team_id ☑ team_size



reviewer$gpa	reviewer$acad...	reviewer$age_...	reviewer$locat...	reviewer$gender	reviewer$signi...	reviewer$user_id	review$avg_s...	review$score1	review$score2	review$score3	review$score4	review$score5	reviewee$tea...	reviewee$tea...
NULL	NULL	NULL	NULL	NULL	21	37212	4	4	5	6	4	1	5069	4
NULL	NULL	NULL	NULL	NULL	21	37212	7.4	8	7	7	6	9	5470	17
Does not ...	Science	26-30	Netherlands	Male	124	2230	6.8	7	7	8	7	5	5693	7
Does not ...	Science	26-30	Netherlands	Male	124	2230	2.2	2	1	3	4	1	5836	4
Do not w...	Business	31-35	Spain	Male	80	2848	4.4	4	1	7	9	1	5069	4
3-3.49	Other	21-25	Spain	Female	75	2826	5	5	5	5	5	5	5215	4
3-3.49	Engineering	over 50	United St...	Male	110	19502	3.6	5	5	2	3	3	5215	4
3.5-4.00	Science	36-40	Greece	Male	125	27386	3.6	3	6	5	3	1	5250	3
3-3.49	Engineering	over 50	United St...	Male	110	19502	7	9	5	9	6	6	5693	7

I Like… / I Wish… / What If?

I LIKE…

The 1D histograms on the parallel coordinates display.
The use of brushing and linking between components.
Attention to small details, such as white masks for axis labels.

I WISH…

Data fields were configured to focus on the most relevant features.
The interaction was faster (lower latency).
A color-blind friendly color palette had been used.

WHAT IF?

One tried to visualize the data using a technique other than parallel coordinates? What encodings work best for the intended audience?

Critique Categories

Visualization Design
Choice of visual encodings (expressive, effective?)
Is the appropriate information visible by default?

Interaction Design
Choice of interaction techniques
Do they enhance understanding of the data?
Usability, discoverability, performance

Overall Design Quality
Organization, legibility, fitness for chosen goals