1 Uncertain Uncertainty [ /6]

Which paper on did you read?

- “Representing Uncertainty in Graph Edges: An Evaluation of Paired Visual Variables”, or
- “Visualizing Uncertain Information”, or
- “Automated Observer Siting on Terrain, Showing Intervisibility”, or
- “Algorithm and Implementation Uncertainty in Viewshed Analysis”?

Write 3-4 sentences describing the algorithm and/or the primary contribution of this paper.
2  RPI Admissions Statistics [ /9]

<table>
<thead>
<tr>
<th></th>
<th>Fall 2016</th>
<th></th>
<th></th>
<th>Fall 2017</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>total</td>
<td>male</td>
<td>female</td>
<td>total</td>
<td>male</td>
<td>female</td>
</tr>
<tr>
<td>applications</td>
<td>18,524</td>
<td>12,771</td>
<td>5,753</td>
<td>19,505</td>
<td>13,475</td>
<td>6,030</td>
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<tr>
<td>admitted</td>
<td>8,215</td>
<td>5,442</td>
<td>2,773</td>
<td>8,420</td>
<td>5,604</td>
<td>2,816</td>
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<td>enrolled</td>
<td>1,691</td>
<td>1,157</td>
<td>534</td>
<td>1,663</td>
<td>1,164</td>
<td>499</td>
</tr>
</tbody>
</table>

We received 20,377 applications for Fall 2018. Using two different methods for visualizing the error, sketch your prediction for the Fall 2018 freshmen class. For each plot, give the common name for that error plot style (used by researchers) and an advantage and a disadvantage of that plot style.

plot style name:

advantage:

disadvantage:

plot style name:

advantage:

disadvantage:
With color A, draw the floorplan of Moe’s, the Library Cafe, the Union McNeil room, or a similar culinary establishment. Label the important features of the floorplan. With color B, draw a plausible *vector field* representing the movement of customers within this space.

Next, again in color A, redraw the same floorplan from above. Now, using color B (and optionally additional colors) overlay on the floorplan a plausible sketch showing the results from:

- the technique used in “Image Based Flow Visualization”, or
- the algorithm presented in “Farthest Point Seeding for Efficient Placement of Streamlines.”

Depending on which paper you read. Also... please indicate which paper you read!
4 Please Visualize Responsibly

4.1 Ethics

Which of the following statements are part of the proposed “Code of Ethics for Data Visualization Professionals” and the proposed “Hippocratic Oath for Visualization”? (check all that apply)

- Data sources must be reliable and verifiable, attribution should be given whenever possible.
- I shall not use visualization to intentionally hide or confuse the truth which it is intended to portray.
- Examine any visualization you see with a critical eye, and be open to criticism yourself.
- I will respect the great power visualization has in garnering wisdom and misleading the uninformed.
- To really do visualization responsibly, immerse yourself in the world of visualization.

4.2 Privacy

Write 3-4 sentences describing a specific mechanism from “Adaptive Privacy-Preserving Visualization Using Parallel Coordinates” or “Agile Ethics for Massified Research and Visualization”, that ensures the privacy of user data.
5 Short Answer [ /9]

5.1 Our impossibly high standards? [ /4]
A few papers this term generated heated in-class discussion (e.g., “DimpVis”). Pick one of those papers (name or describe the paper) and in one well-written, concise, and detailed sentence, summarize the primary concern of your classmates about the paper.

Now, putting aside that concern, summarize in one well-written, concise, and detailed sentence the most significant, interesting, and/or surprising result (in your opinion) of this paper.

5.2 Does every academic viz paper require a user study? [ /5]
Which paper did you read: “Interactive Visualization on Large and Small Displays: The interrelation of Display Size, Information Space, and Scale”, or “Active Reading of Visualizations”, or “Immersive Collaborative Analysis of Network Connectivity: CAVE-style or Head-Mounted Display?” In 2-3 sentences, describe a core research question and key detail of the paper’s user study.
6 The Memory Match Game

You read some of the papers listed below (and heard all of them presented/discussed in class). Cross out exactly two papers that you remember the least about. Match the remaining papers with the most relevant items/statements below. NOTE: Each letter may be used zero or more times and each box may have zero or more letters.

(A) “Guidelines for Effective Usage of Text Highlighting Techniques”
(B) “Designing Effective Step-by-step Assembly Instructions”
(C) “QSplat: A Multiresolution Point Rendering System for Large Meshes”
(D) “Interactive Cutaway Illustrations of Complex 3D Models”
(E) “Visualization, Selection, and Analysis of Traffic Flows”
(F) “LabelMe: Online Image Annotation and Applications”

(G) “Globe Browsing: Contextualized Spatio-Temporal Planetary Surface Visualization”
(H) “Intuitive Exploration of Volumetric Data Using Dynamic Galleries”
(I) “Scatterplots: Tasks, Data, and Designs”
(J) “Synthetic Aperture Confocal Imaging”
(K) “An Image-based Approach to Extreme Scale In Situ Visualization and Analysis”
(L) “Interactive Dynamic Volume Illumination with Refraction and Caustics”
(M) “What Makes a Visualization Memorable?”

Lego & Ikea

Mechanical Turk for a touch screen

efficient rendering of huge data

applied to medical data

uses transparency

box/volume “brushing”

used a geographic map

recommendations / best practices for visualization

uses a spatial data structure

multiple camera positions

requires a supercomputer

chart junk

your choice: