

COMS W6998

Voyager Discussion

-Presenter Adam Kravitz
-Scribe Carmine Elvezio

Discussion Notes

Note- It was compared to PoleStar

Q- Are they capable of doing layered graphs?

A- Adam- It seems like it is possible based on playing around with it for Assignment 2.

Q- So was Voyager more expressive?

A- Voyager is like a breadth search, it allowed for 2x more exploring

- Underneath Voyager, there are many related graphs
- Data you picked + other data you might want to pick
- When you select a graph it will then give you more encodings
- Breadth of voyager better than the depth of Tableau (PoleStar)

Q- Is there any future work that you have seen that builds on this in the past 5 years?

A- Draco is the follow up to this work (same team).

Note- Preference weights hard coded which wasn't the case in Draco.

Personalizing weights would turn out to be very important.

Hypothetically, you can use Draco instead for the engine for recommendation

Q- What did we think of the difference between Voyager and Draco?

Celia - Used Voyager before paper, it was easy to use, and then paper showed that that was what the authors were going for.

Deka - Can't use Vega for the type of exploration that Voyager excels at.

Q-Felt like I was reading documentation for an application vs research paper. What were the research questions?

A- Different communities prioritize different things - for tools/artifacts, "why did they design it this way"

- They spent a lot of time justifying why the heuristic doesn't matter as much
- The Viz community tends to talk about the tool and justifying why they built it
- The Design section justifies why they built what they built

Q - Was there a hypothesis in the paper?

A- Is there an easy way to do BFS

A- What's the best way to do exploration. Then that's the question - difference between breadth and depth.

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Q- If that's the question, did they do a good job in the evaluation?

A- (Adam) In using it, I found Voyager to be effective

Q- Celia - Did they successfully answer that question? User count seems low.

A- Often happens in some communities.

A- The users were familiar with the system vs. a novice at creating graphs. If you know what you're doing, is it really exploration?

A- Prof - How did they get their metrics?

A- Celia - Page 8 - 6.2.3 - Bookmarks show increased data variable coverage

- Number of variable sets a user interacts with

- Makes sense, with tableau it is difficult to enumerate all combination of the variables

- Prof. Interesting Metric - Any tool that shows you different variables should aim higher for a metric

Alternatives:

- How about How many insights

- How many conclusions

- The time take to arrive at the conclusion

- You ask them a day later and do they remember more

Q-Is user feedback a powerful metric? The important part of the evaluation is the users? Is it powerful?

A- Prof. They usually have a balance of both. It might be biased towards their system, but it is a way to quantitatively evaluate it. There are different ways of getting at that. The authors pick the quotes so who knows what other feedback they've gotten. Some users said they risk letting the recommendations drive what they see. If the recs are biased, you might be biasing people

Q- Adam- As found in another class, if you pick random data sets, you might find something, but is that a good thing?

A- Celia There are different approaches to data analysis.

How might this be useful to what I'm doing in my own research?

Using ggplot is too verbose to do quick snapshots.

A- Is it the Automated Design or recommendation better

A- Celia, I don't push the recommendations away, but probably the automated design is more important

A- Adam, it might be good at hypothesis forming.

A- Prof. If you're doing sequential analysis, you can't make an infinite number of decisions due to false positives.

Q- Is it reasonable to assume this tool can turn a training set into a testing path?

A- Prof. Definitely avoid training and testing on the same set - test somewhere else.

Q- Adam - Does Voyager cross the line of influencing the users?

A- Deka - The different tools can be used for different tasks

A- Prof - It's a long a spectrum

Q- Is depth vs. Breadth a real thing?

A- Most say yes. Lots of tradeoffs, good questions to ask.

Q- Are there other ways of doing breadth oriented analysis (different than just adding variables)?

A- Deka - Different Visual Encodings

A- Related to our project, but another way is to generate an interface for the data sets for the users to use themselves. (Basically, can you generate a Voyager). Let the user control the whole procedure.

A- Depth - You know what you want. Breadth, you're not sure.

Q- Is combination of variables breadth?

A- There might be something in the middle. "Heres the general thing I want to do, can I get recommendations?"

Q- Are visualizations the best way of doing human-data interaction?

A- Text is a type of visualization. For example, Polaris can show a spreadsheet. Text is a very common way to visualize data.

Q- How is auditory data treated?

A- Music/sound is an example of data encoded that way. But other things would be difficult to encode and understand at visualizations

Q- Perhaps a good system would automatically organize the text data.

A- Kinda magic but the invited speaker Eric, his paper is a version of that.

A- Text can be used for text summaries or the raw data.

Q- What are other characteristics that should be important that we haven't really seen?

A- Came across paper with modality where user specifies what it should like and then fill in the blanks

A- Looking for statistical relationships

A- Configurable weights

- Don't want us to get overwhelmed.

A- Prof Recommendations are a tradeoff- since if they're not very good, you will waste time looking at it.

A- Prof. Might depend on the task or goal. Difficult to encode or express what your task or goal is.

-Great example are the assignments. Some of these don't make sense, even if it is expressive.

Presentation Notes

-Uses Vega-Lite too (compared to Draco)

-Background: APT (hardcoded effectiveness ratings)

-Also Tableau, Excel as alternatives

-Tableau DFS for making graphs

-Uses Compass (the recommendation system - which they seemingly created)

-2x expressiveness

-Looked at 3x the amount of data sets