test

Requirements

Topics:

- How should visualization adapt to its new, more diverse audience? Visualization for communication addresses an audience that is much more varied in demographics and literacy than visualization for analysis. When do visualizations communicate successfully, and how can we measure that success? Methods might include web analytics, behavioral studies, eye tracking, or even galvanic skin response.

- How can practitioners build visualizations that communicate successfully? Are there models that can guide effective communicative visualization, possibly derived from theories of aesthetics, memory, metaphor, or persuasion?

- Are there certain visualization techniques (like "chart junk") that are particularly helpful for communication? How well do they work in concert? What tools do practitioners need to help them build visualizations for communication? What are typical practitioner workflows, and which parts of them are most challenging?

- Which application areas are still emerging for communicative visualization? How would the success of new tools be measured? What new lessons about visualization for communication are being revealed by the COVID-19 pandemic? For example, should physical distancing and economic disruption change communicative visualizations? How can data visualization help to fight against misleading facts and disinformation? What tools, platforms, and approaches have been useful to dispel untruths?

- We particularly encourage contributors to address and illustrate issues like these with visual case studies that demonstrate the success or failure of communicative visualization projects in data journalism, public health and more. Our goal is to consider a broad range of examples and learn from their design decisions and process.

- We invite contributions from any discipline, but particularly encourage journalists and designers to submit their work involving data-based communication or reporting. Scientific contributions concerning visualization for communication are of course welcome, as well.

Late-Breaking Works in Progress

- The purpose of this category is to present work in progress and receive feedback from attendees.

- For research that is in progress, this session will provide a supportive atmosphere for helpful feedback and fresh perspectives on your aims and/or methods. Recommended structure for your one-page submission is: introduction, preliminary methods, preliminary findings (if applicable), and questions for attendees.

- For practitioners, this is an opportunity to present contributions that showcase innovative visualizations or provide provocations for new ideas to emerge. Your one-page brief should include project background, design objectives, methods or design process, links to visualization design alternatives, preliminary findings (if available), and questions for attendees.

Content

Aim:

- visualizing uncertainty

- important aspect of visualization for analysis. while often ignored in visualization for communication.

- it's already challenging to express uncertainty in the context of prediction of future events, such as election polls or COVID-19 prognoses. but what if there's uncertainty in something that we consider to be 'facts'?

- for example, in headline "17% of phd students experience burnout symptoms", the percentage is an estimate. the real value may lay within a bound of uncertainty. that's because we infer something from a sample to a population. we can visualize this uncertainty with error bars on bar charts or shaded areas in line graphs.

- but if we measure an entire population, such as the US census, there are no error bars in the figures. yet still, there may be uncertainty.

- this type of uncertainty is the topic of this project: uncertainty due to missing data. missing data may occur across observations (e.g., some people have no home address and cannot be reached) or within observations (e.g., some topics are sensitive and will not elicit responses). whatever the reason of the missingness, it may influence any [subsequent] estimates [down the line].

- what are intuitive ways to express uncertainty due to missing data to non-expert audiences?

Methods:

- missing data is ubiquitous and often ignored

- but it can gravely influence estimates

- gold standard in science is to 'impute' (i.e., fill in) the missing entries before analyzing the data.

- motivating example: relation between height and weight. quite trivial, but apparent that there should be some coherence.

- developing an online evaluation suite to inspect missing data, impute it, and run analyses. We need visualizations for each step of this process. Visualizations for the first two steps exist, but not for the third.

- hanneoberman.shinyapps.io/shinymice-demo

Question for attendees:

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TODO

- look up mckinley (tableau -> gerkovink.com/slvrepo), tuftee (message of dataviz), wilkinson (grammar of graph)

- add misleading facts/disinformation?

- add link to public health/data journalism