

Critique for “MetroViz: Visual Analysis of Public Transportation Data”

Dear MetroViz Team,

I am very impressed by your work overall. The video is very well organized and clearly illustrates the function of your software. The paper writing looks pretty polished. It would be better if you can provide a demo in addition to the video, so that we can get a better feeling of your tool.

I can imagine how hard it is to deal with a large, multidimensional dataset like the public transportation data, but you did a very good job by visualizing the data in three different ways: map view, route view and calendar view. This allows the user to drill down to different levels of the data. For each of the view, I can see that you managed to provide an overview of the dataset first, then let the users take control and specify which details they would like to see. It would be a very helpful tool for experts of public transportation to understand problems of the current system.

I do have a couple suggestions regarding the design of user interface, the writing, and the evaluation. I have listed my suggestions below.

Design:

1. It would be helpful to add legend in the calendar view. This involves the axis labels, the color scale legend, and legends for the calendar view. It takes me quite some time to figure out the date from the calendar.
2. I noticed that in your video demo, clicking on the route name would highlight all stops. However, the stops are shown as scattered points. It would be better to connect them with a line.
3. I like your initial idea of using glyphs to visualize the data for a particular data (as in the mockup), I think that could be a more compact way of visualizing time series data than the bar charts.
4. It seems that the current interface only allows selection of one day. It might be interesting for analyst to compare multiple days (for example, to ask whether two busy days have similar delay patterns). So I'd suggest to include a feature for selection of multiple days if time permits.

Writing:

5. It would be helpful to define the concept of ridership and adherence clearly early in the paper. In particular, it is not obvious to me how adherence is calculated.
6. The figure captions are generally very succinct. I think you should provide some descriptions of the figure in the caption, so that readers don't need to refer to the text to understand the figure.
7. The paper currently lacks the conclusion section and the acknowledgement section, but I believe you are working on that.

Evaluation:

8. In addition to the user comments, I suggest to incorporate some quantitative results into the evaluation section, such as the users' performance on the tasks. For example, is there a particular task many users have difficulty to accomplish?

Other than these suggestions, I think it is looking very good in general. I believe you can have a solid product by the due date. Thanks for giving me the chance to critique and good luck on your final presentation!

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