**Code Structure and Functionality**

SPECIFICATION

The visualization renders and any interactions or animations work as the reader interacts with the visualization.

 DOES NOT MEET SPECIFICATION

**Reviewer Comments**

I'm grading index\_final.html, which I assume is the final version. In both chrome and firefox, nothing would happen if I used the carrier list or the from month to month menus. I wasn't sure what the carrier list menu was for, but again, if I changed something and hit submit, nothing happened. Same thing with the from month and to month menus.

Also index\_final.html was loading index3.js instead of index\_final.js. I wasn't sure if that was on purpose or a mistake.

SPECIFICATION

Large code chunks are commented, and all complex code is adequately explained with comments. Comments are not overused to explain obvious code.

 DOES NOT MEET SPECIFICATION

**Reviewer Comments**

Great job coding all of this. There is a lot of interesting code and use of d3.

A lot of the code felt uncommented (although other parts were well commented) and it was hard for me to follow what was going on. I marked a couple of places in the code as examples. Try to consider the perspective of somebody who has never seen the code before.

There is also a lot of code that is being commented out and no longer used, which made it difficult to differentiate between what was a comment and what was code. I suggest deleting unused code so as not to cause confusion.

SPECIFICATION

The code uses formatting techniques in a consistent and effective manner to improve code readability.

 MEETS SPECIFICATION

**Reviewer Comments**

The code was formatted well. Nice job.

**Visualization is Explanatory**

SPECIFICATION

The visualization centers on a specific, clear finding in the data.

 DOES NOT MEET SPECIFICATION

**Reviewer Comments**

This visualization is really an exploratory chart rather than an explanatory chart. It is exploratory because it lets me as the chart reader sift through all of the data and make my own conclusions. An explanatory chart is where the chart maker has already done the sifting, founds something really interesting about the data set, and then makes a visualization explicitly showing the interesting finding to the reader.

Examples of potential stories, and I say potential because they idea would have to be explored to see if there is an interesting finding, could be something like

* do certain regions of the country or certain airports perform much better or much worse than other airports
* are some airlines consistently much better performers
* has there been a clear change in the relative performance of the major airlines over the years. In other words, is there an interesting story about the relative positions or performance of the airlines over the years?
* does delay type depend on region, season (in other words is winter different than summer), holidays vs regular days, weekends vs weekdays, certain times of the day, etc?

For this visualization, I as chart reader have to come up with a story on my own by selecting different airports and different years to see if I can see a trend; instead, the chart maker should find an interesting trend and then make a visualization out of that.

Keep exploring the data set until a specific, interesting finding is found. And then make a visualization that highlights the very specific story.

SPECIFICATION

The selected finding is clearly communicated. Design choices foster communication between the reader and the visualization.

 DOES NOT MEET SPECIFICATION

**Reviewer Comments**

This is a really great exploratory visualization. But since I can't find a specific findings, it's difficult to judge if the design choices foster communication.

I do think a line chart is appropriate for time series data and the bar charts are also a good choice for the categorical delay type. If you wanted to compare delay type by month, however, a line chart might be more appropriate so that the reader could see the month by month fluctuation more easily.

The one thing on the bar charts that confused me a little bit was that the x-axis and y-axis were not given axis titles, so I wouldn't know what the values represent. Also, although there is an overarching title for the two charts, there should also be title above each chart. Also one small thing on the delay by type chart y-axis. The top number should be 100% rather than 00%.

**Design**

SPECIFICATION

A reader’s summary of the graphic would closely match the written summary in the README.md file, or a reader would identify at least 1 main point or relationship that the graphic attempts to convey.

 MEETS SPECIFICATION

**Reviewer Comments**

I do think a reader would be able to see on each individual chart which airlines had over 80% on time arrivals and would also be able to see what was causing delays by each month; however, the charts are exploratory rather than explanatory.

SPECIFICATION

The visualization includes interaction or animation. The interaction or animation may be simple, such as a hover, tooltip, or transition. Interaction or animation enhance understanding of the data.

 MEETS SPECIFICATION

**Reviewer Comments**

I think the tooltips are helpful. As I mentioned in another part of the rubric, all of the menus were not functioning correctly.

[Requirements to exceed the specification](https://review.udacity.com/)

SPECIFICATION

The student explains initial design decisions such as chart type, visual encodings, layout, legends, or hierarchy. These are included at the beginning of the Design section in the README.md file.

 DOES NOT MEET SPECIFICATION

**Reviewer Comments**

The README file discussed what the major encoding decisions were; however, the report didn't discuss the reasoning behind the encoding decisions. For example, why was a line chart chosen? Why was 80% chosen to be the threshold? Why were menus added above to be able to change the date range and airport. Why was a bar chart chosen for the month by month delay type chart instead of a line chart?

The README file needs to discuss the reasoning behind the encoding decisions in order to meet specifications on this part.

**Feedback and Iteration**

SPECIFICATION

The student collects feedback from at least three people throughout the process of creating the data visualization. The feedback is documented in the Feedback section of the README.md file.

 MEETS SPECIFICATION

**Reviewer Comments**

Great job getting feedback from your coworkers and making changes. One thing I liked about the changes made were that the chart started to simplify a bit; there weren't as many buttons and options. For me, a visualization with a lot of menus and buttons usually indicates that the chart is exploratory rather than explanatory.

[Requirements to exceed the specification](https://review.udacity.com/)

SPECIFICATION

The student presents evidence that the visualization has been improved since the first sketch or the first coded version of the visualization. The student has listed all of the feedback in the Feedback section of the README.md file. Most design choices and changes are accounted for in the Design section of the README.md file. If no changes were made to the visualization after gathering feedback, this decision is explained.

 MEETS SPECIFICATION

**Reviewer Comments**

The README file accounts for the changes that were made after receiving feedback from three people. Great job.

[Requirements to exceed the specification](https://review.udacity.com/)

**Additional Reviewer Comments**

The main thing right to think about is that the project is a very nice exploratory visualization rather than an explanatory visualization with a clear finding. Think about what interesting information might be contained in the data set and try to find something interesting and compelling about it.