**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**

The visualization does render; however, the final "index.\_final.html" is pointing to the javascript file "index\_PFB\_1A.js". I wasn't sure if it was supposed to be pointing to that file or if it was supposed to be pointing to index\_final.js.

index\_PFB\_1A.js has a lot of a few debugger statements, so the project wouldn't load directly.

Please make sure that the file structure is clear about which html file is the final submission, and also make sure that the correct javascript file is loading with the final project. Otherwise I'm not sure what to grade.

You also might want to rename the file "index.html" to something else. A browser will automatically load index.html, so at first I thought that was the final submission. There were also three files with the word "final" in it, so at first I wasn't sure which file was the final final submission.

SPECIFICATION

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

 MEETS SPECIFICATION

**Reviewer Comments**

I do find the commenting to be very helpful. It might be a little too much commenting, but I prefer too much rather than too little in order to understand the code and the different coding decisions. I would add a brief comment in line 245 explaining what the flatten() function's purpose is.

SPECIFICATION

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

 MEETS SPECIFICATION

**Visualization is Explanatory**

SPECIFICATION

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

 MEETS SPECIFICATION

**Reviewer Comments**

This visualization definitely capture the idea of an explanatory chart: airlines that increased ontime performance between 2005 and 2013 while also beating the average for more than 4 years.

SPECIFICATION

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

 DOES NOT MEET SPECIFICATION

**Reviewer Comments**

I like the encoding choices of the line chart, so that part is passing for me. There are a couple of things missing, however, to really communicate the story effectively:

* the chart title uses the word "consistently" and then the subtitle mentions "improved On-Time arrival performance since 2003 through 2015". Those words imply that airline performance is increasing every single year; however it fluctuates up and down for all of the airlines. I would slightly change the wording to so that's it's clear that what is meant is that airline performance increasing from the 2003 value to the current 2015 value.
* A really important part of the story is the average on-time performance across all airlines. The average line should be visualized to show to prove to the reader that what the visualization is claiming is actually true. Otherwise a reader will doubt the findings because the industry average line wasn't included on the chart.
* You might also want to give the reader an idea of what major airlines or how many airlines didn't make it onto the chart because of poor performance. That could be in the form of a short paragraph or some sort of visualization like a bar chart showing the number of airlines that didn't meet the criteria against the number of airlines that did meet the criteria.

In terms of truncating the y-axis between 50-100%. I think it is fine to do this. Some people might disagree because it can make trends and differences look larger. The one thing to always keep in mind when making a visualization is how scale can be used to emphasize or deemphasize trends and slopes. The course talked about this as well. It's just something to always keep in mind when deciding on scale and ranges in a chart.

**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.

 DOES NOT MEET SPECIFICATION

**Reviewer Comments**

A reader would definitely understand the purpose of the visualization; however, because the average line wasn't included, I think a reader would be skeptical of the claims made. The reader doesn't have a reference point to understand the story of which airlines are performing better than the average.

Also the summary section of the README file seems to refer to a previous version of the visualization. Please revise the summary section to reflect the current explanatory story in this new submission.

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**

The tooltips give the exact values for each data point, and the clickable legend allows the reader to filter out data to focus on specific airlines. Good job.

[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.

 MEETS SPECIFICATION

**Reviewer Comments**

The README file does a great job of explaining the design choices for the final chart. The README file also takes the reader through the design process and what was working and what was not working in each iteration.

One note on the readme file; I had to change the image sources from ""../master/img/EDA1.PNG" to just "img/EDA1.PNG"

**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 collecting feedback, documenting it and making it clear what changes were made based on the feedback.

[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 and previous versions all show how the visualization has been adjusted and improved over time. A lot of the files still had debugger statements, so I would remove those before turning in the next submission. I'd also try to organize the file name or the submission structure a little bit so that it's clear to the next reviewer which document contains the final version.

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

**Additional Reviewer Comments**

Great job finding an explanatory story. Now it is just a matter of a couple of details on the visualization; in other words, if the visualization is going to claim that these airlines were performing better than the industry average, then the visualization needs to prove this claim by including the industry average on the chart.