

## Airplane Crashes and Fatalities Final Portfolio

### Introduction

Working on this portfolio was a challenging learning experience. The fact that we needed to plan and do everything from scratch was the first challenge. Deciding the topic of my project was a little overwhelming. I wanted to find a topic to cover both the interactive and narrative visualizations. I think keeping a consistent topic makes it more interesting to build a project to show to prospective employers.

After thinking about my interests and doing extensive web surfing, I choose to focus on Airplane Crashes and Fatalities From 1927 to 2009. My idea pooped with the FiveThirtyEight article [“Should Travelers Avoid Flying Airlines That Have Had Crashes in the Past?”](#) As a fanatic traveler this article caught my attention immediately. I was wondering which airlines were the most dangerous, and I felt awkward for how clueless I was about the subject. After reading the article, I was disappointed because I did not get the answers I wanted. I thought it was very difficult to understand the point of the narrative, and I wanted to translate this complicated article into something interesting and straight forward.

### My Experience

For the exploratory theme, I drew 4 different visualizations and made them work together interactively. The project consists of an interactive map and timeline controlled by the user selection from the airline’s table. When clicking on the desired airline the incident location updates, and the user can start exploring. On the map when selecting one incident, a summary of that specific crash appears enabling the user to learn more about it. I wrote instructions about how to interact because I wanted the user to be able to find the desired information as easy as possible and to make it engaging enough to motivate keeping learning more about other airlines.

After the in-class critique for the exploratory theme, I was able to identify other few things that I could improve. The class suggested adding the airline logos in the table to enhance clarification at the time of looking for an airline. Also, when selecting the airline, the incident locations were too small and hard to identify on the map. It was suggested to make them bigger and to zoom in close to the point of the actual incident, and adding a filter to search table.

I did not make changes in the exploratory theme as I wanted due to lack of time. I will keep working on this visualization to make it part of my personal portfolio. I had some challenges making the

## Data 73200- Data Viz Portfolio Reflection – Kathia Vargas

visualization to fit properly in a full screen. The default zoom in the stylesheet is 75%, but having this setting makes the tooltip of my timeline inaccurate. Also, I would like to change the positioning of my elements to make the visual more user friendly. I feel this viz has potential, and I still have a lot of room of improvement.

In the narrative theme, I summarize the important facts about airplane crashes in 4 different sections. The first section is about the top 60 locations of incident occurrences. To caught to reader's attention, I drew a horizontal bar chart representing the number of incidents by location sorted by the highest number of incidents to the lowest. My finding was that Russia is the country with the highest number of incidents after the USA, and I made this my focus by referencing an article about how Russia's Air Industry Is a Victim of Its Own Success. The second section is about the top 20 plane operators involved in accidents. To represent my data, I used an interactive bubble chart sorted by the number of fatalities per operator. This is one of my favorite visualizations in the whole portfolio. It is simple and it moves when you hover over it. I made it interactive to make the narrative more engaging. In the third section, I drew a line chart representing the number of fatalities over time. My finding was that 1972 was the year with the most fatalities. I reference the article "[The year of flying dangerously: 1972](#)" from Flight Safety Australia to reinforce my point. In my last section, I have a stacked bar chart and a table listing the main causes of fatal accidents by decade. The section was the most challenging since I wanted to make my bar chart and table to work interactively. This is a pending change that I will resolve in the future as well.

The in-class critique of the narrative was also very helpful. At the time of presenting, my visualization needed some work to be done, and I still needed some suggestions to continue with my layout. The class suggested making the horizontal bar chart with the top 60 locations less crowded. I appreciated this suggestion because after removing the labels from the x-axis the chart looked much better. Also, it was suggested to add an indication of interactivity to my bubble chart. I included the pointer cursor when hovering over to solve this issue. In the third section, I had two-line charts, but instead I made one chart to simplify my point, as suggested by the class. I think it was a great idea because it was the same information in both charts making them redundant.

## **Conclusion**

After putting the portfolio together, I felt I very proud of myself. At the beginning of the semester I had no idea of the power of build visualizations with d3. Now I feel secured enough to put this skill on my resume. I loved everything about this class, starting with the knowledgeable and talented professor and her very effective teaching method. I found the tutorials and the assignment reviews very helpful. I think it was a good practice to give feedback to the students after submitting the code. Identifying my mistakes gave me a good vision of how I should improve for the next assignment. Although this was an unprecedented semester, I really enjoyed and learned a lot from this class. Now I feel empowered and ready for the next level to keep improving my web design skills.