

Executive Summary

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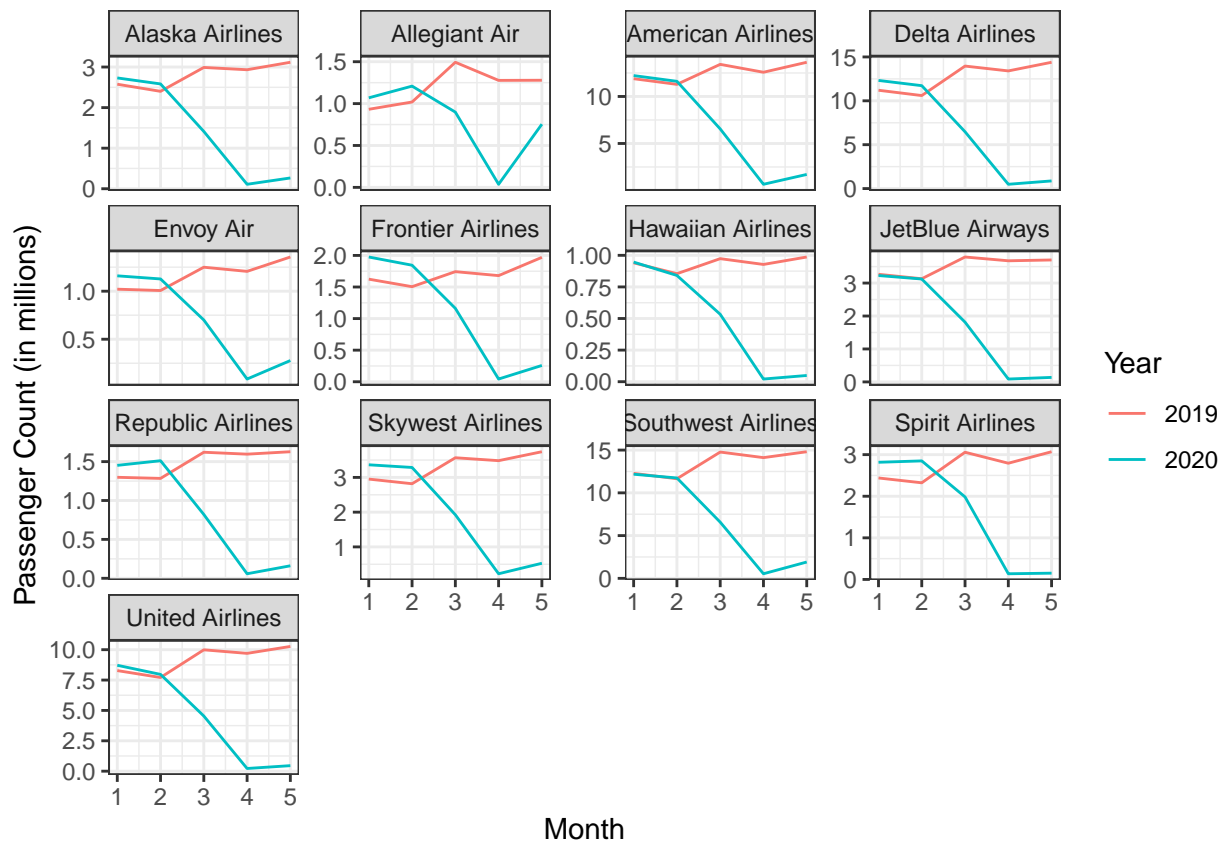
Overview

COVID-19 has impacted our our way of life in countless ways. But one particularly affected industry was the airline industry. When the virus struck the United States, passenger counts undeniably took a nose dive across the entire country and world. As someone who is particularly interested in transportation and the airline industry, this project was a fun way to explore the specific impacts of COVID-19 on the airline industry from a variety of standpoints. In this project I focused on month-by-month flight segment data in the United States, including both domestic and international flights, to get a snapshot of passenger counts, freight, mail, and the like by region, segment, airline, and many other facets. This data was obtained from the US Department of Transportation's Bureau of Transportation Statistics.

I explored flight data between 2019 and 2020 in the United States. This included both domestic and international flights. Other data sets brought in included population counts provided by the US Census Bureau and COVID-19 daily case count data by state provided by The New York Times.

Most Interesting Observation

I would argue that the most interesting observation observed in the project was passenger travel by airline. The following graph tracks passenger count (in millions) during January-May in 2019 and 2020.



The above graph demonstrates an important point. Most mainline carriers seem to follow a similar trend for commercial passenger flights. January & February 2020 were actually better months for the industry than the same months in 2019. However, there was a steep dropoff in March (unsurprisingly, given the fact that the pandemic's reality set in about halfway through the month), and travel was almost nonexistent in April & May. But one apparent holdout seems to be Allegiant Air. Unlike the other airlines, its passenger count rebounded to more than half of its pre-pandemic levels. This begs the question of why this particular airline was extremely successful compared to its competitors (or perhaps not its competitors). Some background research tells us that Allegiant is a low-cost, very leisure-focused airline with most of its routes in small and mid-sized airports. This makes sense because a large portion of passenger count, particularly in off-summer months, comes from business travelers. Business travel is not picking up quickly, and it certainly was not doing so in the early months of the pandemic (i.e., May). But perhaps a reason Allegiant has managed to increase its passenger counts so quickly is because people are still flying for leisure to an extent, and in greater numbers/proportion than business travelers. Allegiant is also not an international carrier, so there was not an international market it had to recover. This is important to understand how travel may be impacted in the next few months or perhaps semipermanently. There has been discussion in the business world about how COVID-19 and the shift to virtual meetings and work have perhaps laid the groundwork for less business travel. This graph would certainly indicate so in the immediate beginnings of the pandemic, although it may not be indicative of the future. However, it is still important to see how leisure really has picked back up compared to business, which used to be an incredibly large segment of passenger trip purposes.