

Flights from Pittsburgh - DAT 102 Final Project (12/15/2019)

1. Single Unit of Analysis - Flights
2. Which flight from Pittsburgh to one of the 5 busiest airports in the USA is the most expensive? Which flight has the most volatile fluctuations in price from week to week?

At first, the question I wanted to ask was as follows, "How far in advance is the best time to book a flight for the best price?" Given our proximity to the holiday season, and a limited time frame to gather the data, I decided it'd be best to re-consider the question. Similar questions that have value are the two listed above.

3. Flights from Pittsburgh International Airport - PIT
 - Flights to Atlanta
 - o Flights on Sundays
 - Flights to Los Angeles
 - o Flights on Sundays
 - Flights to Chicago
 - o Flights on Sundays
 - Flights to Dallas/Fort Worth
 - o Flights on Sundays
 - Flights to Denver
 - o Flights on Sundays
4. Sunday Flights from PIT to one of the 5 Major Airports Listed Above
5. Variable - Price of the Flight - in USD
6. Excel Spreadsheet - "Data" Tab
8. Sampling Procedure - Use Google/Flights to get flight prices. Set trip type to One-Way, 1 passenger, Economy. Sort flights by price (defaults as ascending order). Record only flights that depart and land on the same date, and only flights that do not have airport transfers. They can have as many stops as needed, and have a duration as long as needed, as long as they do not fall into the above exceptions.
9. Resource used to determine the 5 busiest airports in the USA - <https://www.worldatlas.com/articles/busiest-airports-in-united-states.html>
10. Hypothesis - Certain Airports will have very consistent flight prices week to week, while others will have different prices almost every week.
11. Excel Spreadsheet - "Data" Tab
12. Excel Spreadsheet - "Descriptive Statistics" Tab
13. Excel Spreadsheet - "Descriptive Statistics" Tab
15. The data suggests that DEN is consistently the most expensive flight. The highest price came from a Holiday 2019 flight to LAX (\$425), but both the mean and median for DEN were the highest recorded statistic. LAX did have the largest standard deviation, which meant that the flight from PIT to LAX had the most fluctuations in price week to week.
16. The one thing I would like to see done differently next time would be to record the price fluctuations of the same flight (specific date and time) over the course of a year. I would do this to find out if it's cheaper to book a flight 12, 9, 6, 3, 1, or .5 months in advance. To do this however, you would have to record these prices over a 12 month period, meaning you'd have to wait a year to see the results.