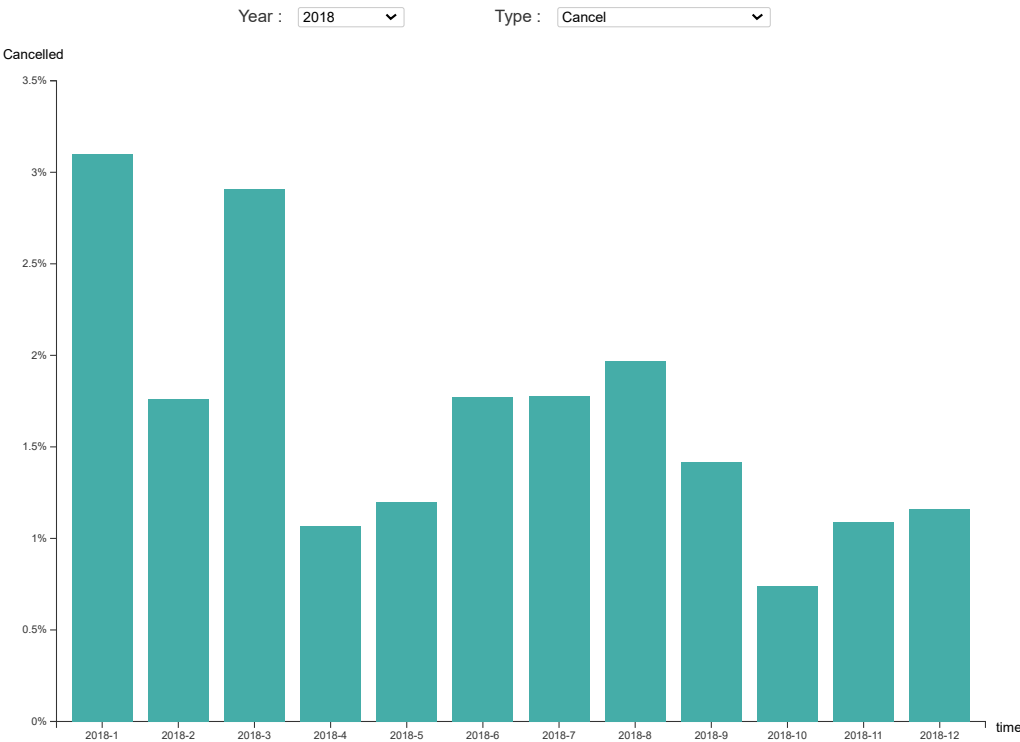# Exploring US Commercial Flights: A Data Visualization Study (2016-2018)

Introduction:

Welcome to my data visualization project, where we delve into the intricate world of US commercial flights from 2016 to 2018. Our study utilizes a comprehensive dataset that includes flight delays(Below it will be represented by average delay time for each flight in minutes), cancellations(Below it will be represented by cancellation rate), airport types, and geographical information. The aim is to provide insights into the patterns and trends of commercial flights during this period. Whether you're a traveler, an aviation professional, a researcher, or simply interested in flight patterns, this visualization offers a unique perspective on US commercial flights. Notice that, we exclude all data related to Alaska and Hawaii.
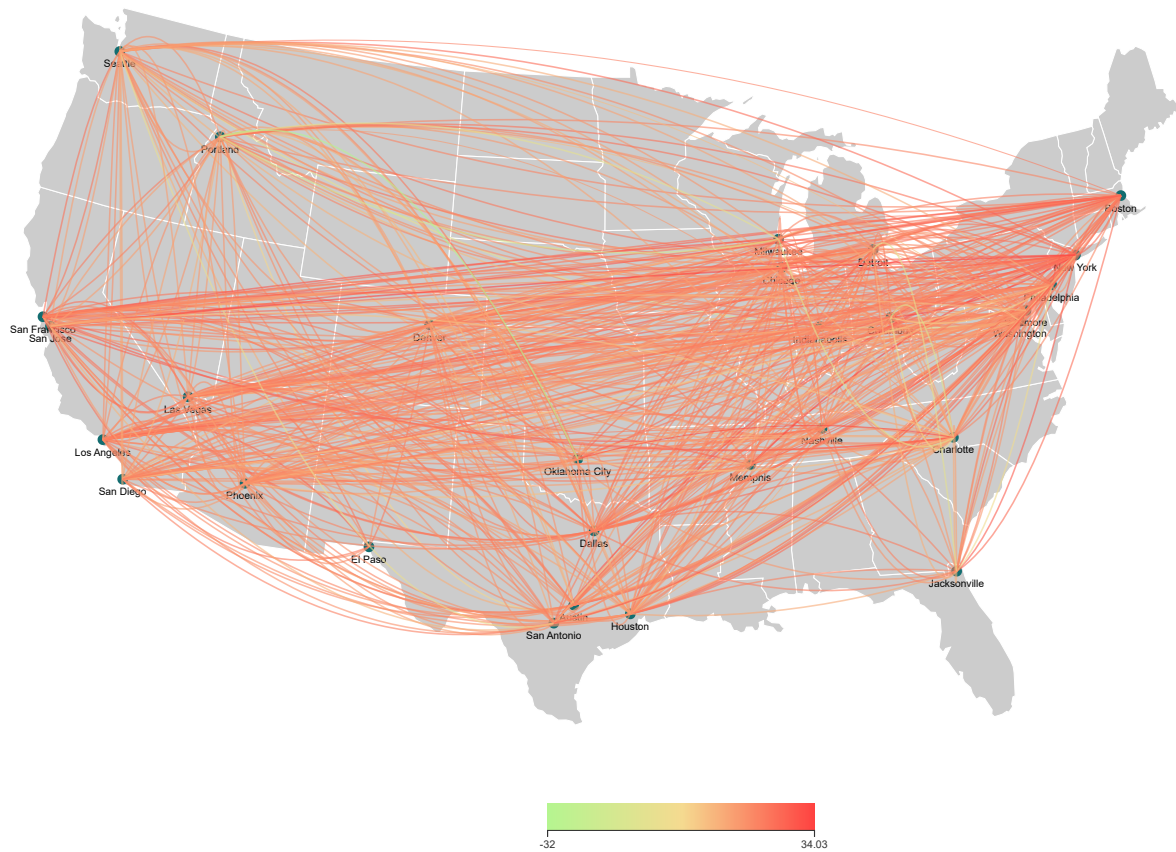
Bar Chart of Flight Data

Our first visualization is a neat bar chart representing flight data over time. The bars represent the total number of flights, average delay time for each flight, or cancellation rate, depending on what you choose. This chart provides a summary of the flight data, enabling easy comparison across different time periods. Select a year and type of date to delve deeper into the data and understand the trends of commercial flights during that period.

Year : 2018   Type : Cancel

US Map with Flight Connections

Our second visualization is a stylized map of the United States, highlighting the interconnectivity of airports across the country. Each point on the map represents an airport, with lines connecting them to depict flight routes. The color of the lines vary, representing the volume of flights, average delay times for each flight or cancellation rate. This visualization provides a bird's-eye view of the flight network within the US, allowing you to identify the busiest routes and airports at a glance. Explore the map to discover more about the patterns of commercial flights during 2016-2018. You can also select the Major City option to include only top 30 cities with the most population in the US, notice that some cities may not operate an airport.

Year : 2017   Type : Delay   Major City ☑

-32   34.03

US map with each State's flight information

Our third visualization is a color-coded map of the United States, reflecting the aggregate flight number, cancellation rate, or average delay times for each flight data for each state during the selected time period. The color darkness corresponds to the total volume of flights, the cancellation rate, and the average delay time in each state. Darker shades represent higher numbers or longer delays, providing a clear visual summary of state-wise flight activities. This representation allows you to understand which states have the busiest airports, the most cancellations, or the longest delays. Delve into the details of each state by choosing times and type of data on it, unveiling an even deeper level of data analysis for your exploration. This map delivers an expansive view of the trends and patterns that have shaped US commercial flights from 2016 to 2018.

Year : [All   ∨]   Type : [Number of flights   ∨]

23,139   4,397,888