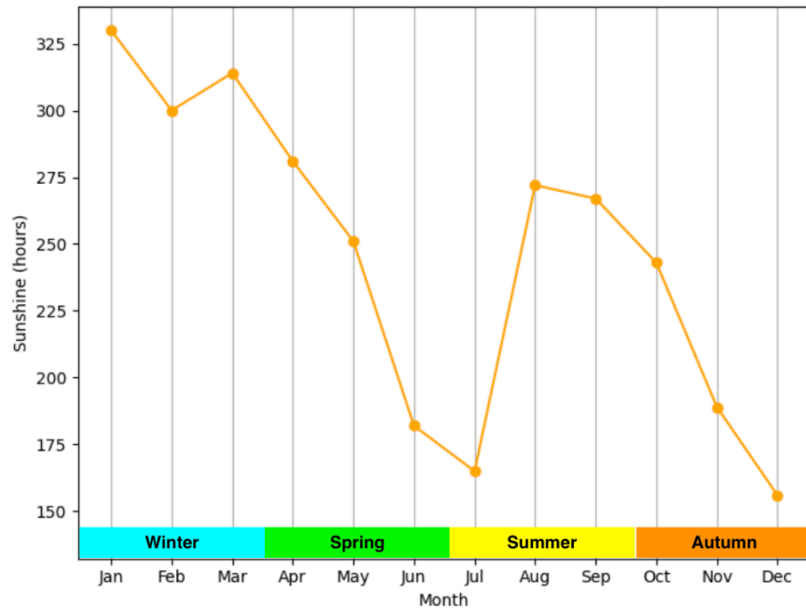
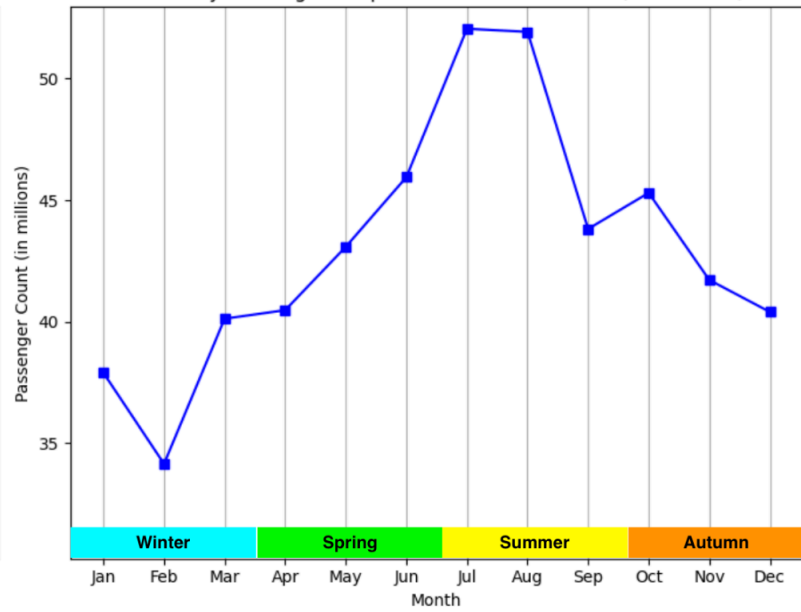


San Francisco: Where Low Sunshine Brings High Visitors

How Much Sunshine Does San Francisco Get Each Month?



How Many Passengers Deplane at SFO Each Month (1999-2024)?



Note: Sunshine data depicts the average sunshine hours for each month in San Francisco recorded from 1981 to 2010.
Deplaned data was transformed to depict the total number of people who got off a plane at SFO each month from 1999 to 2024.

When deciding whether to visit a specific city, it's reasonable to assume that that city's weather could affect one's decision. Being from the Bay Area, I decided to see if this could be the case in San Francisco, specifically regarding the relationship between San Francisco's average monthly sunshine hours and the number of people who deboarded a plane at SFO each month. San Francisco is known as a major tourist hub in the US but it is also known for its very unique weather, as such, I thought it could prove interesting to analyze this. Moreover, knowledge about this relationship is relevant and interesting to understand because understanding how weather patterns can affect tourism rates in San Francisco can influence how businesses in San Francisco go about daily business practices such as marketing, event planning, etc.

I used two datasets to create my visualization: a dataset from <https://www.usclimatedata.com/> (I named weather) which shows average monthly climate measurements for six major US cities (including San Francisco) from 1981 to 2010 and a dataset from <https://www.sf.gov/data--san-francisco-tourism> (I named sfo) which shows traffic data at SFO from 1999 to 2024. In order to process the data, I first filtered sfo only to include the data for deplaning and filtered weather to only include the data for San Francisco. I then extracted the month of each row in sfo and performed an inner join of weather with sfo on the month. These transformations were necessary because they discarded irrelevant data and helped in aligning time frames so that my visualization may focus on relevant metrics.

For my visualization, I decided that two separate line plots plotted side by side would be most effective at analyzing the relationship. I chose line plots because they effectively emphasize trends over time and I decided not to plot the lines overlaying each other in order to increase clarity and reduce visual clutter and confusion surrounding axes dimensions. For the color palette, I used orange for the sunshine data since orange evokes the essence of the sun and blue for the passenger data since blue contrasts well with orange. Additionally, I made sure to include a creative title that captures my research question, subtitles in question style for each plot to better specify what each plot conveys, axis labels to increase interpretability, and annotations added in photoshop showing the seasons to better understand where each plot peaks and dips in relation to the seasons of the year.

Based on my visualization, it appears that months in San Francisco with a high average number of sunshine hours have a lower number of people deboarding a plane at SFO. A conclusion can, therefore, be drawn that more sunshine in San Francisco is correlated with lower rates of travel into the city. This is an interesting insight because one would think that the results would be opposite since people tend to enjoy sunny weather compared to rainy weather and, thus, would be more inclined to travel to San Francisco when the weather is nicer. This suggests that in terms of weather and travel,

San Francisco differs from the common conception that nicer weather correlates with higher rates of tourism. To fully understand why this could be the case, the incorporation of additional variables such as temperature, tourist events, business conferences, etc could be helpful. To conclude, my visualization and the insights that arise from it can be helpful because it can help tourism boards, airlines, weather forecasters, and the like be able to better plan future pricing options, tourist events, and other businesses practices.