

# Air Traffic Passenger Statistics

## Data Description:

This dataset about San Francisco International Airport Report on Monthly Passenger Traffic Statistics by Airline. Data is self-reported by airlines and is only available at a monthly level. Data is updated quarterly . Airport data is seasonal in nature, therefore any comparative analyses should be done on a period-over-period basis (i.e. January 2010 vs. January 2009) as opposed to period-to-period (i.e. January 2010 vs. February 2010) . The dataset have 46671 rows and 12 columns .

### The columns :

Column Name	Definition
<b>Activity Period</b>	The year and month at which passenger activity took place.
<b>Operating Airline</b>	Airline name for the operator of aircraft with passenger activity.
<b>Operating Airline IATA Code</b>	The International Air Transport Association (IATA) two-letter designation for the Operating Airline.
<b>Published Airline</b>	Airline name that issues the ticket and books revenue for passenger activity.
<b>Published Airline IATA Code</b>	The International Air Transport Association (IATA) two-letter designation for the Published Airline.
<b>GEO Summary</b>	Designates whether the passenger activity in relation to SFO arrived from or departed to a location within the United States ("domestic"), or outside the United States ("international") without stops
<b>GEO Region</b>	Provides a more detailed breakdown of the GEO Summary field to designate the region in the world where activity in relation to SFO arrived from or departed to without stops.
<b>Activity Type Code</b>	A description of the physical action a passenger took in relation to a flight, which includes boarding a flight ("enplanements"), getting off a flight ("deplanements") and transiting to another location ("in-transit").
<b>Price Category Code</b>	A categorization of whether a Published Airline is a low-cost carrier or not a low-cost carrier.
<b>Terminal</b>	The airport terminal designations at SFO where passenger activity took place.
<b>Boarding Area</b>	The airport boarding area designations at SFO where passenger activity took place
<b>Passenger Count</b>	The number of monthly passengers associated with the above attribute fields.

### **Question/need:**

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- 1- What is the expected increase in the number of passengers from 2020 to 2021 ?
- 2- Most traveled country in 2021?
- 3- The difference between the rate of domestic and foreign trips between the years 2020 and 2021?
- 4- Select which airlines offer the most low cost ?

### **Tools:**

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- 1 – GitHub : To upload project files .
- 2- Jupyter : To write the code
- 3- Python : The language in which the code will be written. Some important libraries will be used, including:
  - 1- Pandas .
  - 2- Numpy.
  - 3- Matplotlib.
  - 4- Seaborn.
  - 5- Scipy .