

Unlocking insights into the global air transportation network project

SUBMITTED BY

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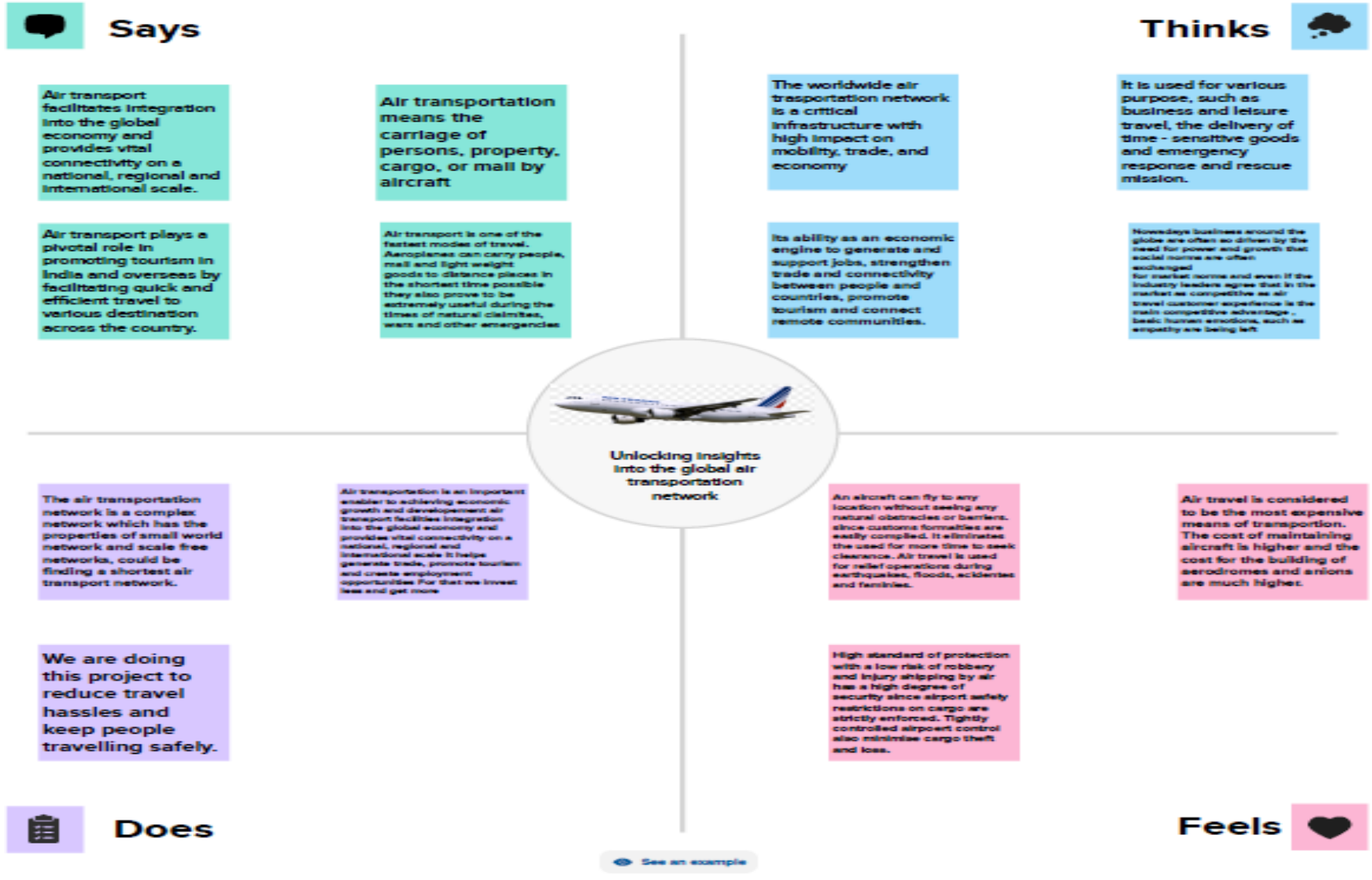
Air transportation network :



INTRODUCTION :

The air transportation network is a complex network which has the properties of small-world networks and scale-free networks. The importance of air transport lies in its ability as an economic engine to generate and support jobs, strengthen trade and connectivity between people and countries, promote tourism, and connect remote communities. The industry experts predict that the growth in the aviation sector will fuel tourism, both of which have shown resilience and are recovering from the COVID-19 pandemic. India's aviation market is currently the third-largest and fastest-growing in the world, with enormous potential for further growth.

EMPATHY MAP:



BRAIN STORMING :



Brainstorm & idea prioritization

Use this template in your own brainstorming sessions so your team can unleash their imagination and start shaping concepts even if you're not sitting in the same room.

- 1. Welcome to the page
- 2. How to collaborate
- 3. All people recommended



Before you collaborate

A list of ideas is only as good as the way you use it. Here are some tips to help you get going.

[Go to ideas](#)

- ☐ **Team priority**
Make sure you have a clear idea of what you want to achieve.
- ☐ **Be clear**
Make sure you have a clear idea of what you want to achieve.
- ☐ **Get feedback**
Make sure you have a clear idea of what you want to achieve.

[Open editor](#)



Define your problem statement

What problem are you trying to solve? How can you solve it? This will be the focus of your brainstorm.

[Go to ideas](#)

Problem
A clear statement of what you want to achieve.



Key rules of brainstorming

- ☐ **Be clear**
- ☐ **Be clear**
- ☐ **Be clear**
- ☐ **Be clear**
- ☐ **Be clear**
- ☐ **Be clear**



Brainstorm

What ideas do you have that come to mind? How can you solve it? This will be the focus of your brainstorm.

[Go to ideas](#)

Phase 1 **Phase 2** **Phase 3** **Phase 4**

Phase 5 **Phase 6**

Tip
You can use this template to brainstorm ideas for your project.



Group ideas

Take some time to group your ideas into clusters. This will help you to see the big picture and to identify the most important ideas.

[Go to ideas](#)

Tip
You can use this template to group your ideas into clusters.

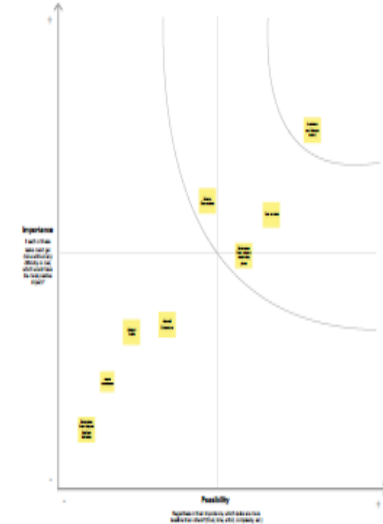


Prioritize

Take some time to prioritize your ideas. This will help you to see the big picture and to identify the most important ideas.

[Go to ideas](#)

Tip
You can use this template to prioritize your ideas.



After you collaborate

How do you feel about the ideas you have generated? How can you use them to solve your problem?

[Go to ideas](#)

Quick actions

- ☐ **Brainstorm**
Make a list of ideas that come to mind.
- ☐ **Group ideas**
Take some time to group your ideas into clusters.
- ☐ **Prioritize**
Take some time to prioritize your ideas.

Keep reading forward

- ☐ **Brainstorm**
Make a list of ideas that come to mind.
- ☐ **Group ideas**
Take some time to group your ideas into clusters.
- ☐ **Prioritize**
Take some time to prioritize your ideas.
- ☐ **Brainstorm**
Make a list of ideas that come to mind.
- ☐ **Group ideas**
Take some time to group your ideas into clusters.
- ☐ **Prioritize**
Take some time to prioritize your ideas.

Brainstorming template



Brainstorming template
A clear statement of what you want to achieve.

[Open editor](#)



RESULT :

Tableau - Unlocking insights into the global air transportation network tableau - Tableau licence expires in 13 days

File Data Server Window Help



Connections

Add

airlines
Text file

Files



☐ Use Data Interpreter

Data Interpreter might be able to clean your Text file workbook.

airlines.csv

airplanes.csv

airports.csv

routes.csv

New Union

New Table Extension

airlines (2)

Connection

☒ Live

☐ Extract

Filters

0 | Add

airlines.csv

routes.csv

airplanes.csv

airports.csv1

airlines.csv

9 fields 6162 rows

100

rows

Name

airlines.csv

Fields

Type	Field Name	Physical Table	Remote Field Name
#	Index	airlines.csv	index
#	Airline ID	airlines.csv	Airline ID

#	#	Abc	Abc	Abc	Abc	Abc
airlines.csv	airlines.csv	airlines.csv	airlines.csv	airlines.csv	airlines.csv	airlines.csv
Index	Airline ID	Name	Alias	Iata	Icao	Cal
0	-1	Unknown	\N	-	null	\N
1	1	Private flight	\N	-	null	
2	2	135 Airways	\N	null	GNL	GE
3	3	1Time Airline	\N	1T	RNX	NE
4	4	2 Sqn No 1 Elementary Flying...	\N	null	WYT	

Data Source

Sheet 1

Dashboard 1

Dashboard 2

Dashboard 3

Dashboard 4

Story 1

Number of airports

Sheet 3

Sheet 4

Sheet 5

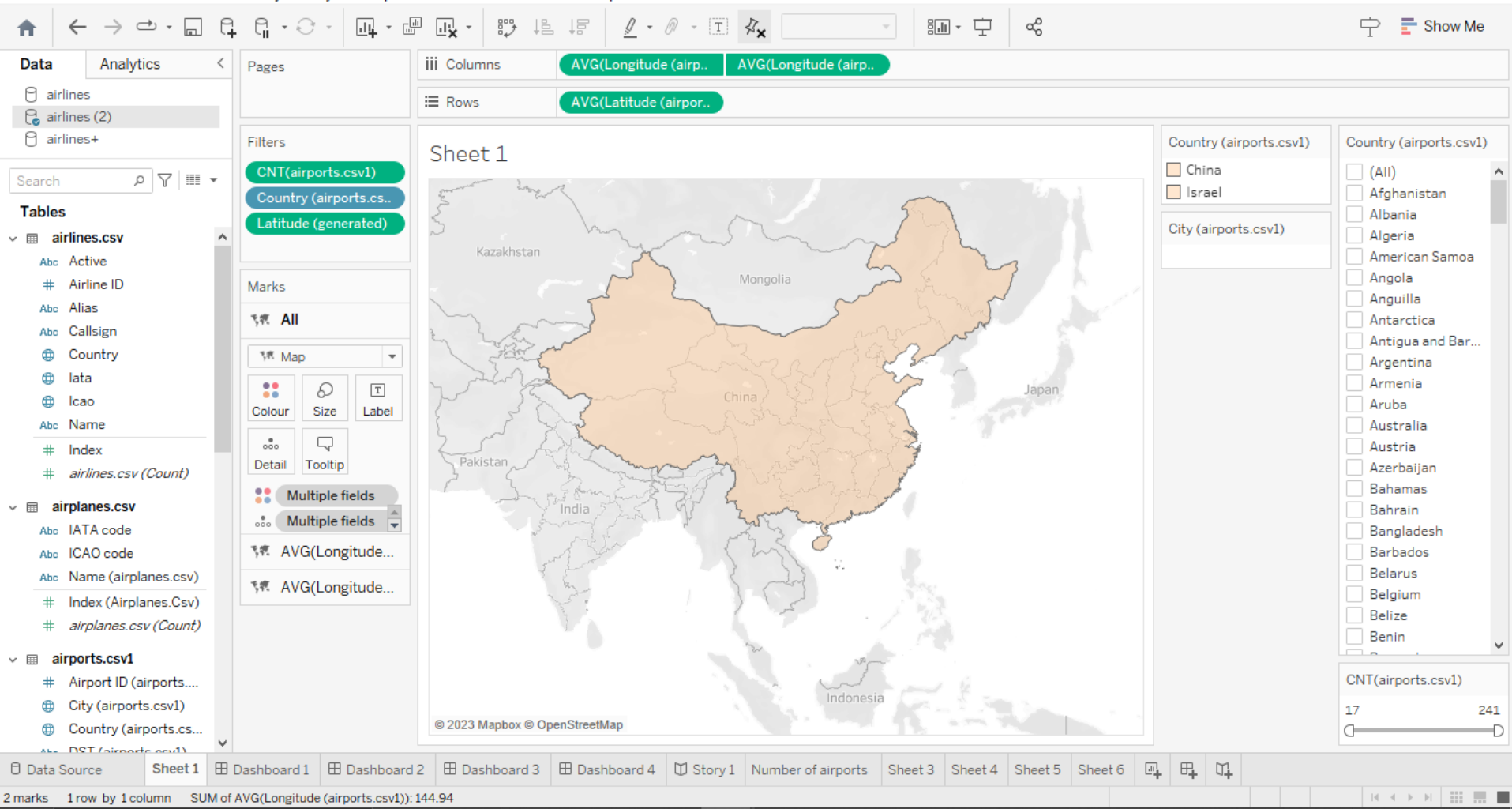
Sheet 6

+

+

+

14 4 10 100 1000





Data Analytics

- airlines
- airlines (2)
- airlines+

Search

Tables

- airlines.csv
 - Active
 - Airline ID
 - Alias
 - Callsign
 - Country
 - Iata
 - Icao
 - Name
 - Index
 - airlines.csv (Count)
- airplanes.csv
 - IATA code
 - ICAO code
 - Name (airplanes.csv)
 - Index (Airplanes.Csv)
 - airplanes.csv (Count)
- airports.csv1
 - Airport ID (airports....)
 - City (airports.csv1)
 - Country (airports.cs...
 - DST (airports.csv1)

Pages

Filters

CNT(airports.csv1)

Marks

Automatic

Colour Size Text

Detail Tooltip

CNT(airports.c..)



CNT(airports.csv1)

7,698 7,698

Tableau interface showing a worksheet titled "Airports at Higher Altitude within a Country".

Columns: CNT(routes.csv), Name (airports.csv1), City (airports.csv1), ICAO (airports.csv1)

Rows: (Empty)

Filters: Country (airports.csv1), Measure Names: Altitude, CNT(airports.csv1)

Marks: Automatic (Table)

Country (airports.csv1): Luxembourg

Highlight Measure Names: Highlight Measure Names

Count of routes.csv	Name (airports.csv1)	City (airports.csv1)	ICAO (airports.csv1)	Altitude (airports.csv1)
1	Luxembourg-Findel Intern..	Luxemburg	ELLX	1,234

1 mark 1 row by 1 column SUM of Measure Values: 1,234

Data Analytics

airlines
airlines (2)
airlines+

Search

Tables

airlines.csv
Active
Airline ID
Alias
Callsign
Country
Iata
Icao
Name
Index
airlines.csv (Count)

airplanes.csv
IATA code
ICAO code
Name (airplanes.csv)
Index (Airplanes.Csv)
airplanes.csv (Count)

airports.csv1
Airport ID (airports.csv1)
City (airports.csv1)
Country (airports.csv1)
DST (airports.csv1)

Pages

Filters

ICAO (airports.csv1)
CNT(airports.csv1)
SUM(Altitude (airpo...)

Marks

Automatic

Colour Size Text

Detail Tooltip

SUM(Altitude (..

Columns

Rows

Name (airports.csv1) City (airports.csv1) ICAO (airports.csv1)

Airports Highest Altitude in World

Name (airports.csv1)	City (airports.csv1)	ICAO (airports.csv1)	
Daocheng Yading Airport	Daocheng	ZUDC	14,472
Qamdo Bangda Airport	Bangda	ZUBD	14,219
Kangding Airport	Kangding	ZUKD	14,042
Ngari Gonsa Airport	Shiquanhe	ZUAL	14,022
El Alto International Airport	La Paz	SLLP	13,355
Capitan Nicolas Rojas Airport	Potosi	SLPO	12,913
Yushu Batang Airport	Yushu	ZYLS	12,816
Copacabana Airport	Copacabana	SLCC	12,591
Inca Manco Capac International Airport	Juliaca	SPJL	12,552
Golog Maqin Airport	Golog	ZLGL	12,426

SUM(Altitude (airports....

-1,266 14,472

CNT(airports.csv1)

1 1

ICAO (airports.csv1)

(All)

Limit

Top 10 by SUM([Altitude (airports.csv1)])

Data Analytics

- airlines
- airlines (2)
- airlines+

Search

Tables

- airlines.csv
 - Active
 - Airline ID
 - Alias
 - Callsign
 - Country
 - Iata
 - Icao
 - Name
 - Index
 - airlines.csv (Count)

- airplanes.csv
 - IATA code
 - ICAO code
 - Name (airplanes.csv)
 - Index (Airplanes.Csv)
 - airplanes.csv (Count)

- airports.csv1
 - Airport ID (airports.csv1)
 - City (airports.csv1)
 - Country (airports.csv1)
 - DST (airports.csv1)

Pages

Country: Luxembourg

Active: N

CNT(airports.csv1)

Filters

Automatic

Colour

Size

Label

Detail

Tooltip

Active

Marks

Columns

Rows

Airline ID

Name

Icao

Callsign

Airlines within a country

Airline ID	Name	Icao	Callsign	
1656	Cargolux	CLX	CARGOLUX	
2062	Duclair	DUK	LION KING	
2568	Global Jet Luxembourg	SVW	SILVER ARROWS	
2771	Homac Aviation	HMV	HOMAC	
2972	JDP Lux	JDP	RED PELICAN	
3330	Luxaviation	LXA	RED LION	
3331	Luxembourg Air Rescue	LUV	LUX RESCUE	
3332	Luxflight Executive	LFE	LUX EXPRESS	
4033	Premiair	BAT	BALLISTIC	
4545	Seven Four Eight Air Services	SVT	SIERRA SERVICES	
5407	West Air Luxembourg	WLX	WEST LUX	

Active

☐ (All)

☒ N

☐ Y

Country

Luxembourg

Active

N

Data Analytics

- airlines
- airlines (2)
- airlines+

Search

Tables

- airlines.csv
 - Active
 - Airline ID
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 - airlines.csv (Count)
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 - airplanes.csv (Count)
- airports.csv1
 - Airport ID (airports.csv1)
 - City (airports.csv1)
 - Country (airports.csv1)
 - DST (airports.csv1)

Pages

Source (airports.csv1)

CNT(airports.csv1)

Source (airports.csv1)

CNT(airports.csv1)

Source (airports.csv1)

CNT(airports.csv1)

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CNT(airports.csv1)

Source (airports.csv1)

CNT(airports.csv1)

Source (airports.csv1)

CNT(airports.csv1)

Source (airports.csv1)

Columns CNT(routes.csv)

Rows Source airport

Source (airports.csv1)

CNT(airports.csv1)

Source (airports.csv1)

CNT(airports.csv1)

Source (airports.csv1)

CNT(airports.csv1)

Source (airports.csv1)

CNT(airports.csv1)

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Source (airports.csv1)

CNT(airports.csv1)

Source (airports.csv1)

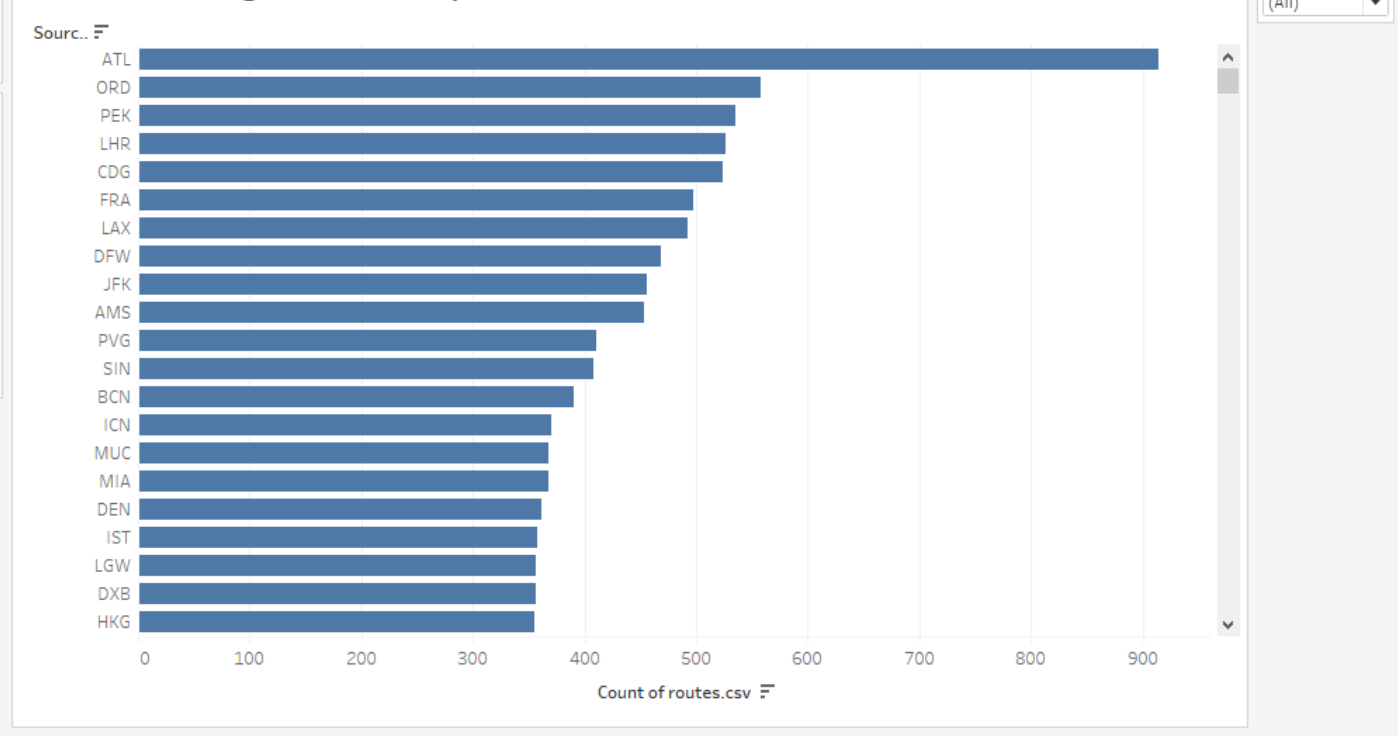
CNT(airports.csv1)

Source (airports.csv1)

CNT(airports.csv1)

Source (airports.csv1)

Number of Flights from Airport



ADVANTAGES :

- High Speed.
- Air is the type of freight capable of traveling long distances in short periods of time.
- Fast Service.
- Send almost everywhere your freight High Standard of Security.
- Natural Route.
- There is less need for heavy packaging.

DISADVANTAGES :

- **High Speed :** It is the fast speed means of transport. Passengers and goods can be transported easily from one place to the other.
- **Air Pollution:** Transportation is a major contributor to air pollution.
- **Noise Pollution:** Transportation traffic significantly contributes to noise pollution.
- **Congestion:** Traffic congestion is a common problem in cities and densely populated areas.
- **High Costs:** ADVERTISEMENTS: Air transport is a costly service. Its operational costs are too high.
- **More Risks:** Air transport is prone to accidents. A small mistake can be very dangerous for passengers. Hijacking of planes is easily possible.

APPLICATION :

It is used for various purposes, such as business and leisure travel, the delivery of time-sensitive goods, and emergency response and rescue missions. Air transportation involves various components, such as air traffic control systems, airport operations, airline operations, aircraft manufacturing and maintenance, and regulatory and safety frameworks. All of these components work together to ensure safe and efficient air transport services. Air transportation plays a critical role in connecting people and businesses around the world, providing faster and more efficient transportation options than other modes of transportation.

CONCLUSION :

The air transport industry is not only a vital engine of global socio-economic growth but is also of vital importance as a catalyst for economic development in most countries and for many regions within each country. Its importance arises not only from its ability to facilitate the movement of people but also its ability to expedite the movement of goods. Currently, rising operating costs, stoked by the high price of aviation fuel combined with slowing or even negative demand growth, will lead to dramatic restructuring of the airline industry and the collapse of many airlines especially smaller ones. Reduced access to air services for both passengers and freight may put many communities at a disadvantages