

GLOBAL AIR TRANSPORTATION NETWORK

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A PROJECT REPORT

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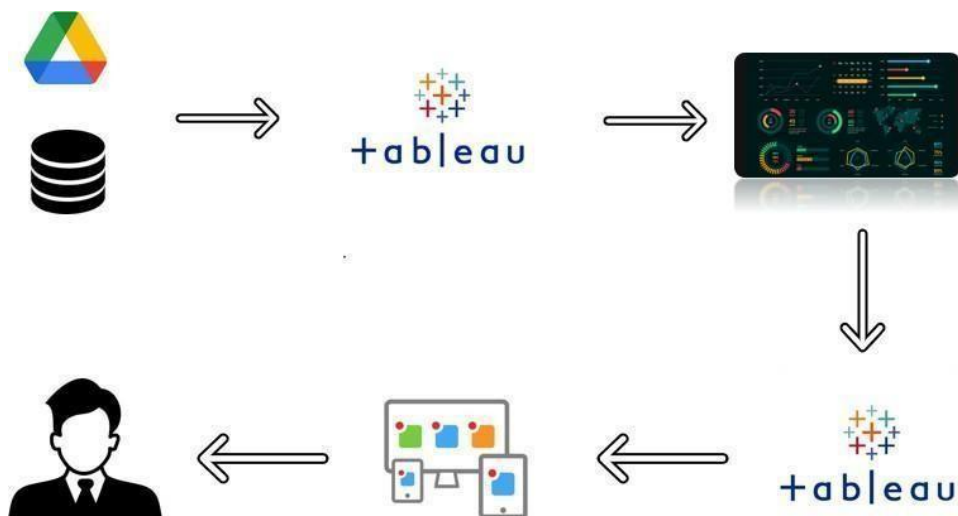
1.INTRODUCTION:

1.1 Overview

Unlocking Insights Into The Global Air Transportation Network With Tableau.

This Global Air Transportation Network dataset is a comprehensive collection of information on airports, airlines and their routes. It contains information such as names, cities, countries, codes (IATA and ICAO) longitudes, latitudes and altitudes of airports across the world with detailed time zone and daylight saving time data. Additionally, this includes information about airlines including their IDs, name aliases, IATA and ICAO codes, callsigns country of origin and active/inactive status. Similarly, it also covers route details such as airline sources to destination airports along with essential details like codeshare stakeholder if any stops required during this journey along with the type of aircraft being used for that particular journey. This dataset has been compiled through meticulous labor by researchers all over the world to give you a comprehensive detail into air transportation networks from around the globe.

Technical Architecture:



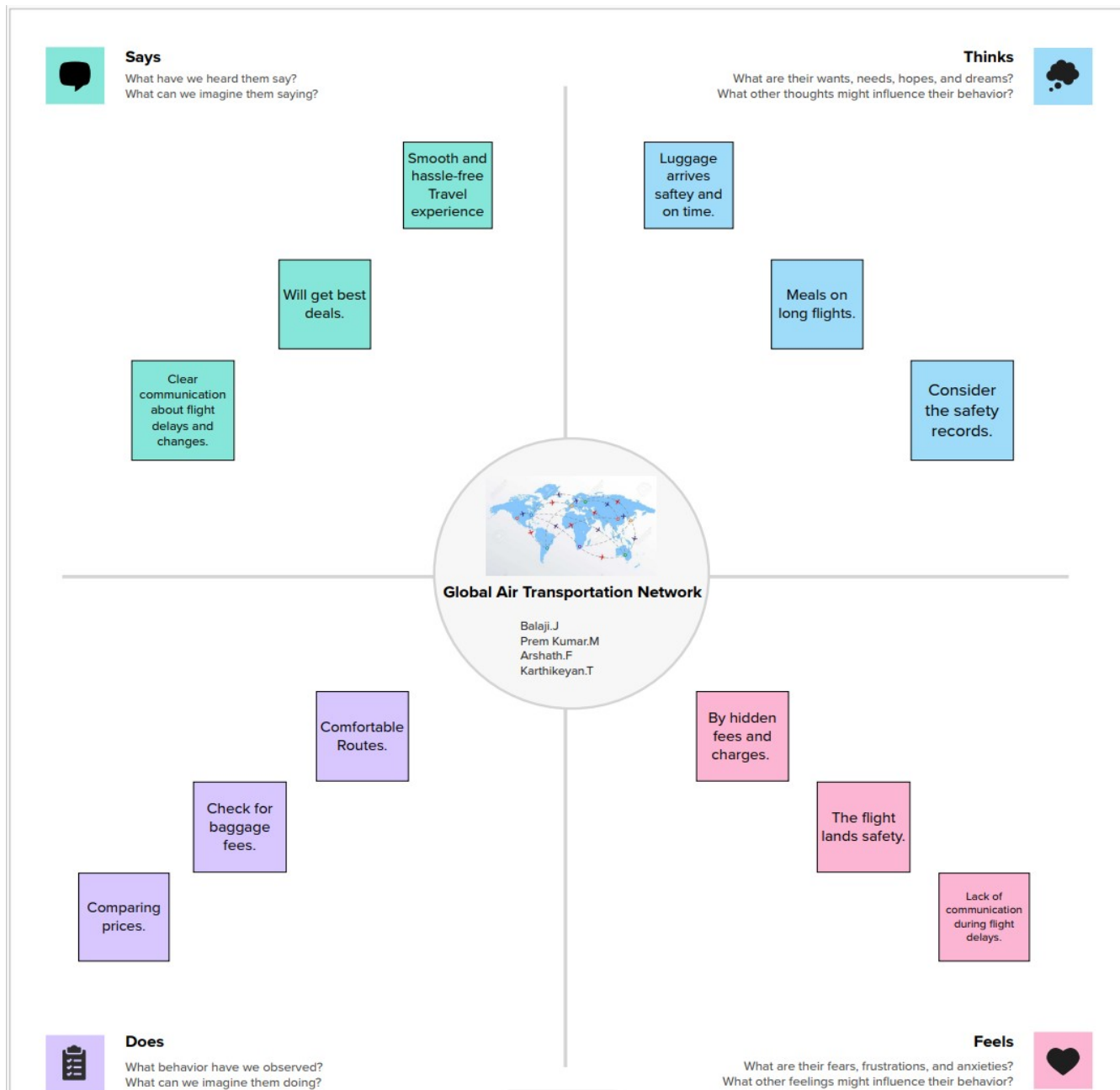
1.2 PURPOSE :

- Air services create significant value for passengers and freight users.
- The Global Air Transportation network is a critical infrastructure with high impact on mobility, trade and economy.
- The Air transportation Network opens up new sales markets and boosts production efficient and investment.
- The Global Air Transportation Network will continue to play a vital role in their future operations and growth, especially in developing countries.
- The Global Air Transport Network connects thousand of destinations around the globe, either directly or via connections at “HUB” Airports.
- IATA Commissioned UK-based economic consultants Oxford Economic Forecasting to undertake a survey of 625 businesses in five different countries, to analyse their use of air services and the value they place on the air network.

PROBLEM DEFINITION & DESIGN THINKING

2.1 Empathy Map:

An Empathy Map is a tool used to help understand and empathize with the perspective of a particular user of customer. It is a visual representation of the user's attitude, behaviors, emotions, and experiences that can be used to gain a deeper understanding of their needs and emotions. The Empathy Map is typically divided into four quadrants: "Says," "Thinks," "Does," and "Feels." In each quadrant, the user's thoughts, feelings, actions, and spoken words are recorded to help build a more complete understanding of their perspective. The Empathy Map is often used in design thinking and user experience research to help inform the design of products or services that better meet the needs of the user.



2.2. IDEATION & BRAINSTORMING MAP:

- Ideation and Brainstorming Maps are tools used to generate and organize ideas in a structured and visual way. They are commonly used in creative problem solving, innovation, and product design to generate a large number of ideas and then organize them into meaningful categories.
- Ideation and Brainstorming Maps typically start with a central theme or problem statement in the center of the map. From there, branches are drawn out to represent different categories or subtopics related to the central theme. These categories can then be further expanded with additional branches to represent specific ideas.
- The purpose of an Ideation and Brainstorming Map is to encourage free thinking and generate as many ideas as possible. It allows participants to visually see how ideas are connected and to build upon each other's ideas. The map can then be used to prioritize and refine the most promising ideas. There are many variations of Ideation and Brainstorming Maps, including Mind Maps, Spider Maps and Fishbone Diagrams.

5

References

that children are playing a very important role in the development of the nation. The children are the future of the nation.

Summary

with some, but not all, of the
major world religions.

Figure 1

Focus
Subject

Lock of

Smart Hubs and co-ops in major cities and urban centers.

Figure 2

Smooth and
hassle-free
travel

15

1. **Introduction**
 2. **Background**
 3. **Methodology**
 4. **Results**
 5. **Conclusion**
 6. **References**

Part 3

1. **Introduction**
 2. **Background**
 3. **Methodology**
 4. **Results**
 5. **Conclusion**

1. **Introduction**
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Keywords: *Self-esteem, self-esteem threat, self-esteem threat sensitivity, self-esteem threat sensitivity scale, self-esteem threat sensitivity scale-2*

SEAL
Furnberg

Consistent
safety
variable

Class communication about flights delayed and

10

Journal of Management Education

and the authors of the 1994 study. In particular, the authors of the 1994 study reported that the "most important" factor in the decision to use a particular technology was the "perceived benefits" of the technology. The authors of the 1994 study also reported that the "perceived benefits" of the technology were the most important factor in the decision to use a particular technology.

1

100

und:

Features
Advantages
Comfort and
Convenience

100

1. **Identify the main idea.**
 2. **Identify the supporting details.**
 3. **Identify the conclusion.**
 4. **Identify the evidence.**
 5. **Identify the counter-evidence.**

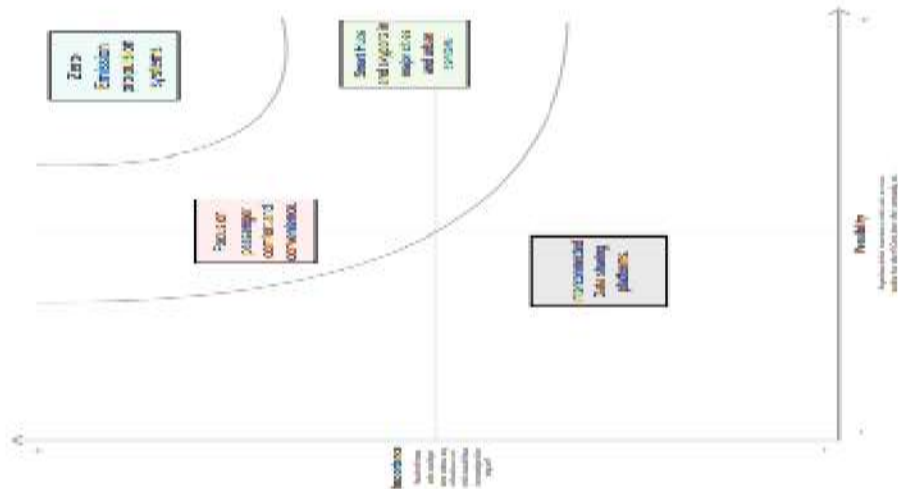
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Frühjahr

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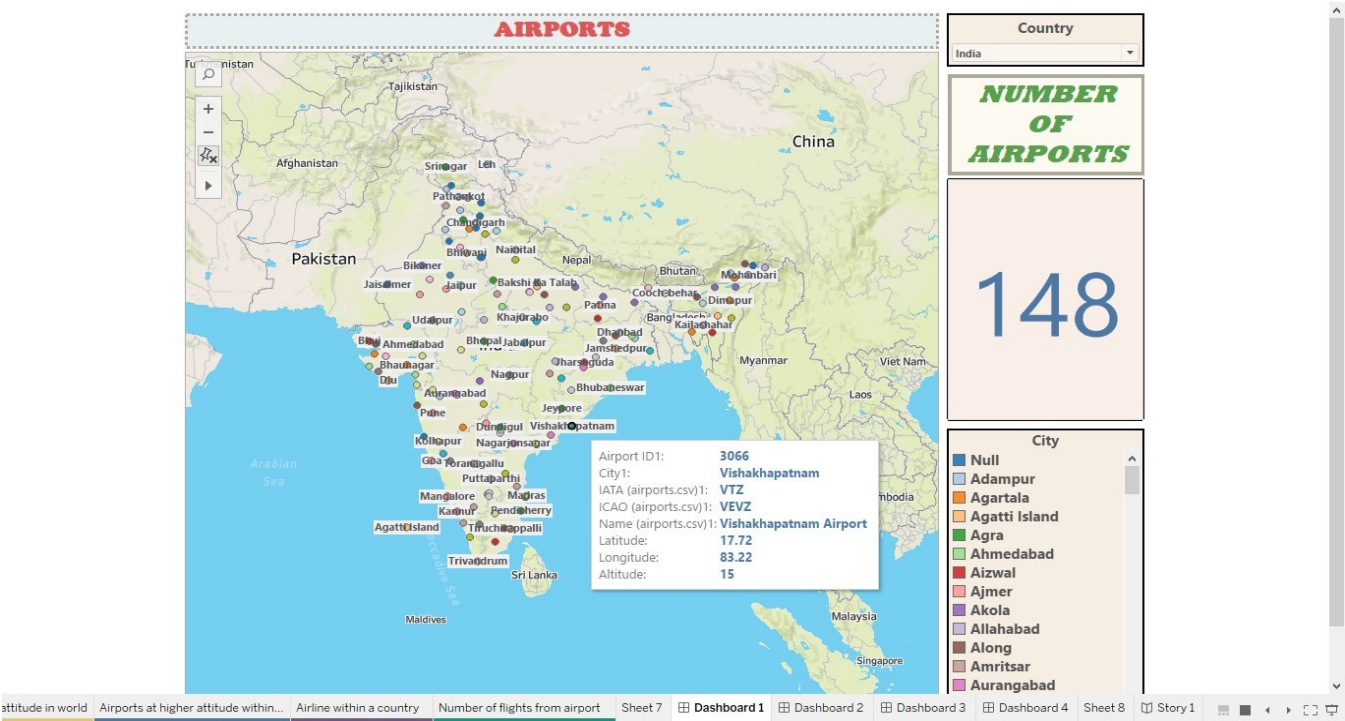
3. RESULTS:

3.1. Creating Dashboard in Tableau:

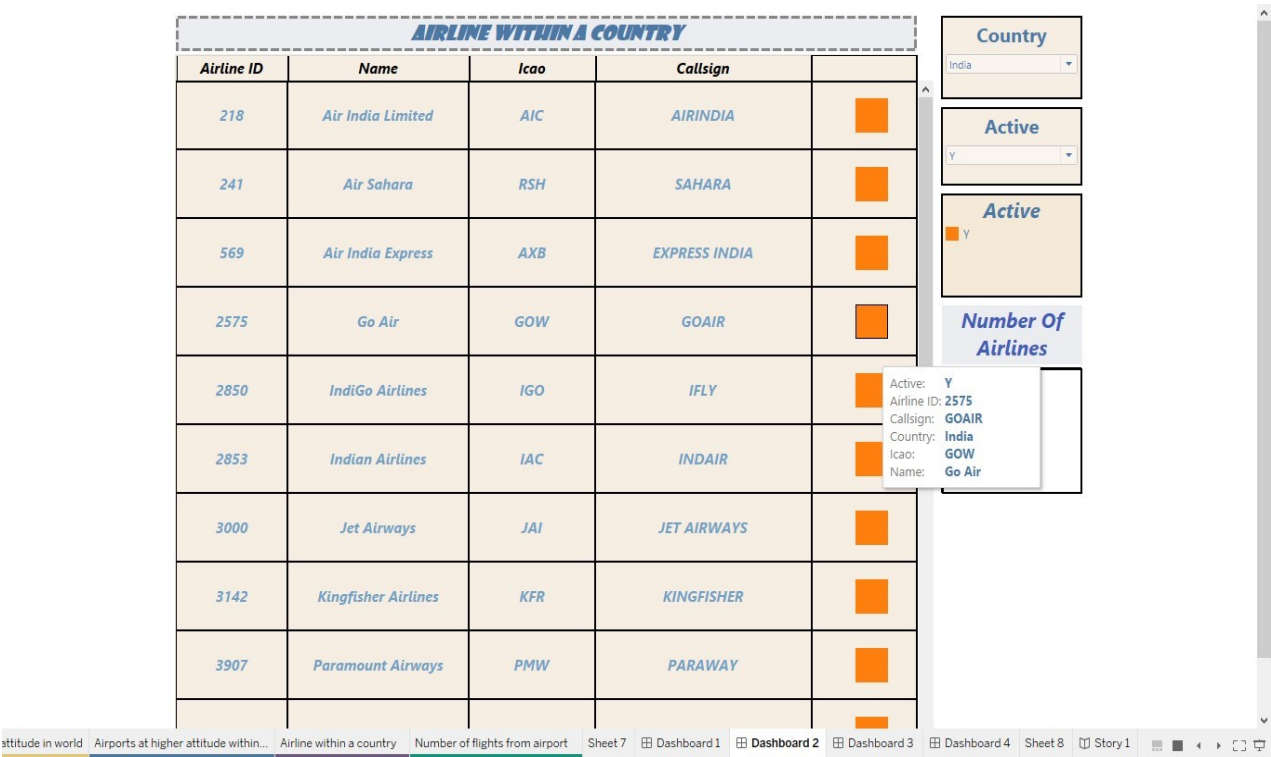
A dashboard is a collection of different kinds of visualizations or views that we create on Tableau. We can bring together different elements of multiple worksheets and put them on a single dashboard.

The dashboard option enables us to import and add charts and graphs from worksheets to create a dashboard. On a dashboard, we can place relevant charts and graphs in one view and analyze them for better insights.

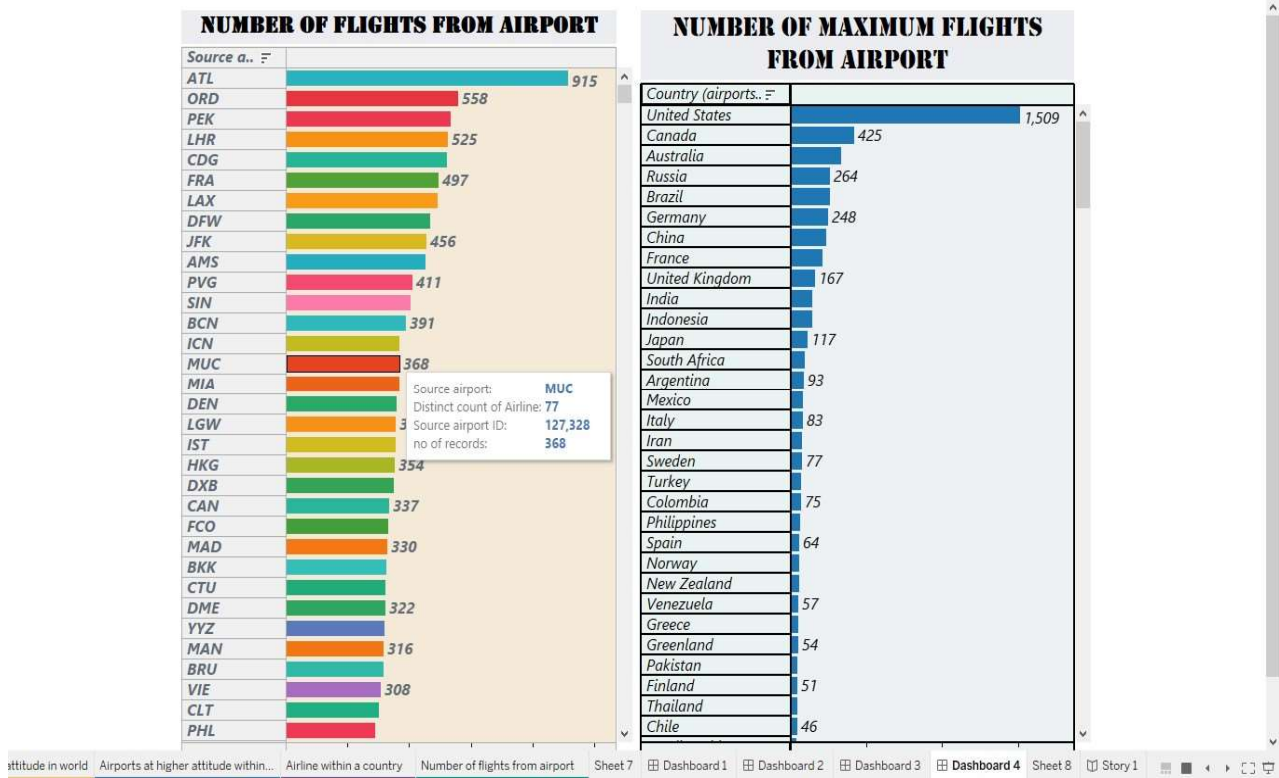
Dashboard 1



Dashboard 2



Dashboard 3



Dashboard 4

AIRPORTS AT HIGHER ATTITUDE WITHIN A COUNTRY					Country
index no.	Name (airports.csv)	City1	ICAO code	Name (airplanes.csv)	
1	Ziro Airport	Zero	Null	5,403	India
	Yelahanka Air Force Station	Bangalore	Null	3,045	
	Vishakhapatnam Airport	Vishakhapatnam	Null	15	
AIRPORTS AT HIGHER ATTITUDE IN WORLD					
Name (airports.csv) 1		City1	ICAO (airports.csv) 1		
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	

City1: Vishakhapatnam

ICAO code: Null

Name (airplanes.csv): Null

Name (airports.csv) 1: Vishakhapatnam Airport

Altitude: 15

index no.: 1

3.2. STORIES:

What are Tableau Stories?

Well, it is a sequence of different charts that combine to provide a cohesive plot to its viewers. In essence, all these charts tell a day about the data which allows the viewers to form the conclusion. The story in Tableau .Contains story points, where each story point is either a work or a dashboard.

When you share a story-for example by publishing a workbook to Tableau Public, Tableau Server, or Tableau Clad-users can interact with the story to reveal new findings or ask new questions of the data.

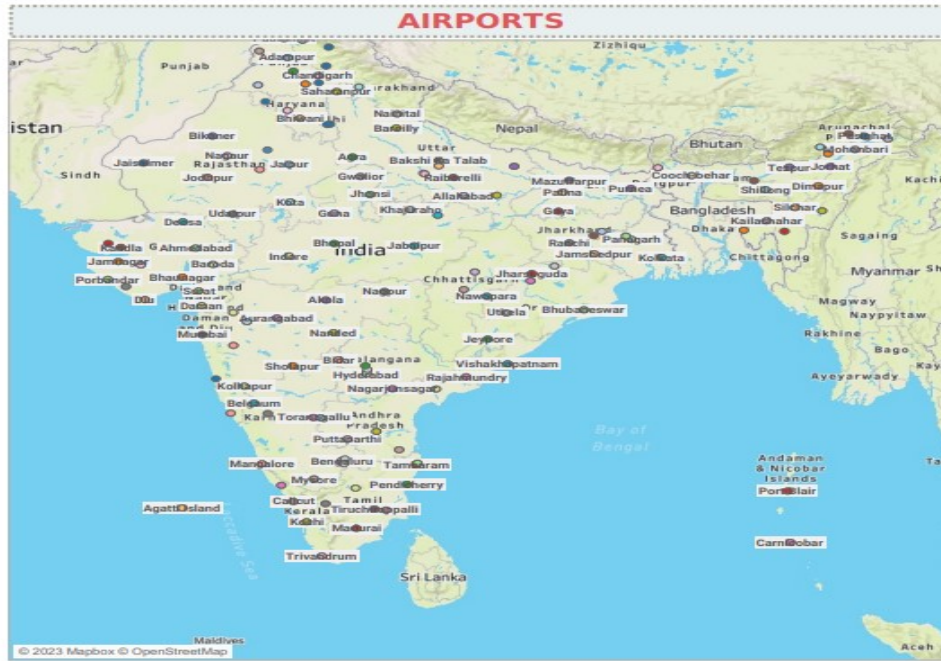
Global Air Transportation Network

World Map Showing Countries with details of Airports.

Table showing List of All Airlines within the Country.

Table showing Airports which are at Highest Altitude in the world and within the Country.

Bar Graphs showing Countries with Max No. of Airports & No of Flights from Airports.



India Country

NUMBER OF AIRPORTS

148

City

- Null
- Adampur
- Agartala
- Agatti Island
- Agra
- Ahmedabad
- Aizwal
- Ajmer
- Akola
- Allahabad
- Along
- Amritsar
- Aurangabad
- Baghdogra
- Bakshi Ka Talab
- Bangalore
- Bikaner
- Bishnupur
- Bongaigaon
- Buxar
- Chandigarh
- Chennai
- Coimbatore
- Dehra Dun
- Delhi
- Dispur
- Durgam Cheruvu
- Ernakulam
- Gandhinagar
- Gaya
- Guwahati
- Hyderabad
- Jaipur
- Jammu
- Jodhpur
- Kolkata
- Lucknow
- Madurai
- Mangalore
- Marignani
- Mumbai
- Nagpur
- Noida
- Patna
- Port Blair
- Raipur
- Ranchi
- Shimla
- Srinagar
- Thiruvananthapuram
- Tiruchirappalli
- Trivandrum
- Varanasi
- Visakhapatnam
- Warangal
- Yashwantrao Chavan Pratishthan

1

Global Air Transportation Network

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Table showing Airports which are at Highest Altitude in the world and within the Country.

Bar Graphs showing Countries with Max No. of Airports & No of Flights from Airports.

AIRLINE WITHIN A COUNTRY				
Airline ID	Name	Icao	Callsign	
122	Auvia Air	UVT	AUVIA	
124	Airfast Indonesia	AFE	AIRFAST	
533	Asia Avia Airlines	AVT	ASIAVIA	
800	Adam Air	DHI	ADAM SKY	
1156	Air Paradise International	PRZ	RADISAIR	
1433	Bali International Air Service	BLN	BIAR	
1440	Bristow Masayu Helicopters	BMH	MASAYU	
1462	Bouraqa Indonesia Airlines	BOU	BOURAQ	
1500	Metro Batavia	BTB	BATAVIA	
1521	Bayu Indonesia Air	BYE	BAYU	

Country
Indonesia

Active

All

Active

N

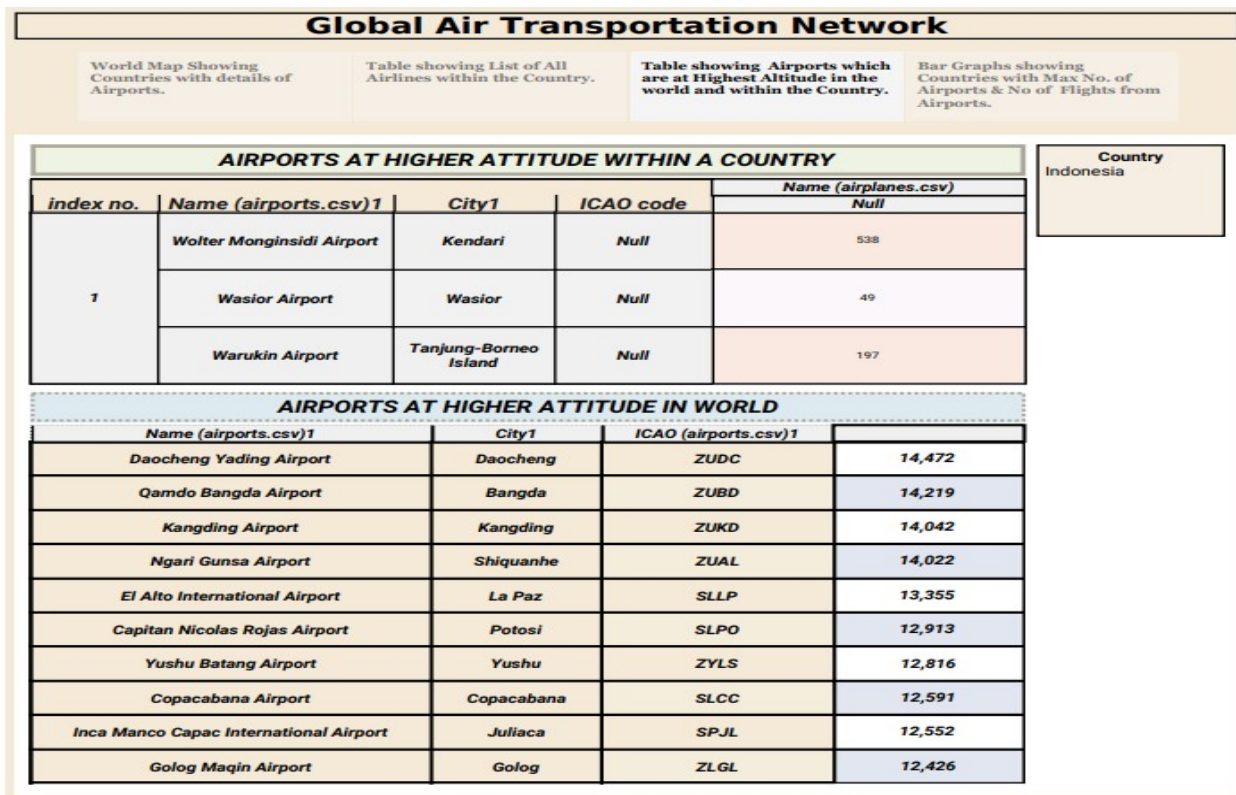
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Number Of Airlines

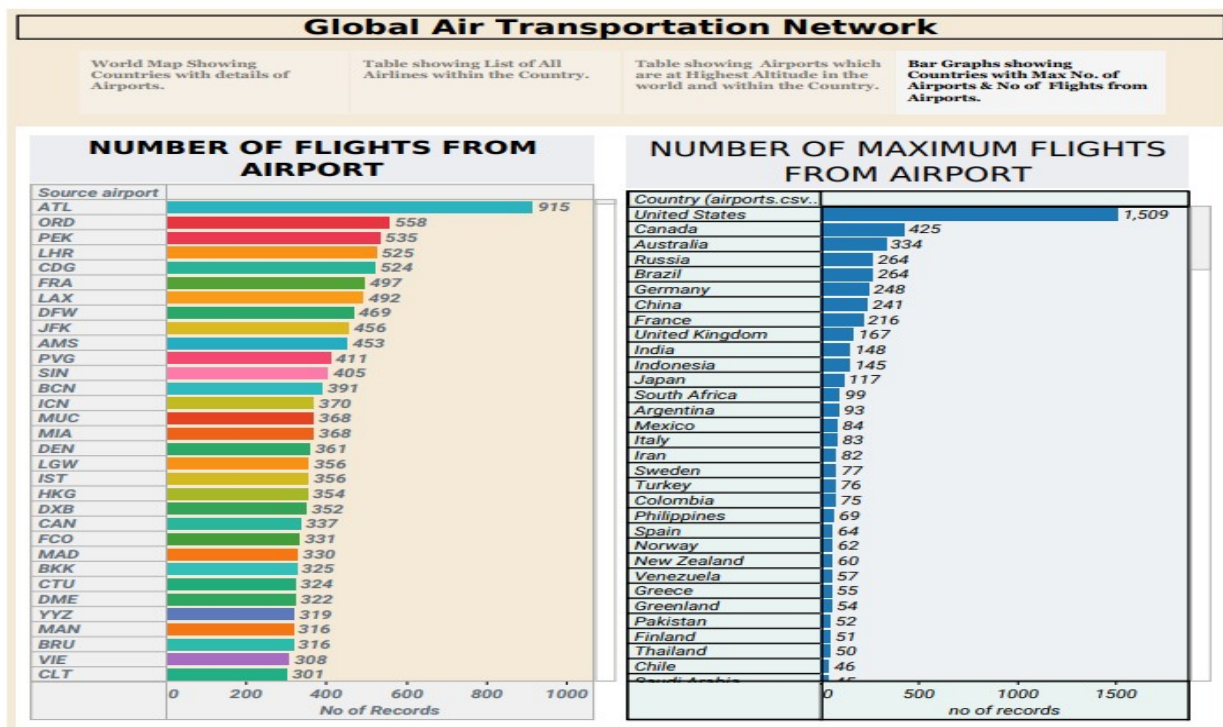
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3



4

4. ADVANTAGES & DISADVANTAGES:

Advantages:

- Provides a detailed understanding of the Airlines routes.
- The Air transportation Network opens up new sales markets and boosts production efficient and investment.
- The air transportation network, the dataset can help stakeholders stay ahead of the curve in a dynamic and rapidly changing industry.
- We find that the most connected cities are not necessarily the most central, resulting in anomalous values of the centrality.
- We identify the communities in the air transportation network.

Disadvantages:

- The analysis may not capture all relevant factors that could impact the air transportation network.
- The accuracy of the analysis may be limited by the availability and quality of data.
- Airports and airplanes are potential targets for security threats, necessitating strict security measures and regulations.
- Major airports often experience congestion, leading to delays.
- “HUB” Airports may suffer from increased congestion and provide advantages to airlines with historic rights to airport slots.

APPLICATIONS:

- Air transport facilitates international trade by providing fast delivery of products and components, reducing lead times, and supporting supply chains.
- Air transport network models are also the tool to investigate system robustness.
- Modeling air transport networks aims airline companies to organize their routes in a cost-efficient way and therefore maximize their profits.
- IATA has developed a connectivity indicator to measure the degree of integration of a country into the global air transport network.
- ICAO codes are also used to identify other aviation facilities such as weather stations, international flight service stations or area control centers, whether or not they are located at airports.

CONCLUSION:

- In United States there are maximum airports (1512 airports) in the world.
- Daocheng Yading Airport at higher attitude in the world.
- The Global Air Transportation Network will become even more important to firms over the future.
- Air Transportation boosts economic development and investment
- The Global Air Transportation network serves an extensive range of destinations, providing more connections between different destinations than would be possible with just direct flights.

FUTURE SCOPE :

- Airports and airlines will continue to expand and improve connectivity, offering more routes and destinations.
- Smaller airports and regional hubs may become more important in providing efficient travel options.
- Air Transportation boosts economic development and investment.
- The Global Air Transportation Network will become even more important to firms over the future.
- The Global Air transportation Network opens up new sales markets and boosts production efficient and investment.
- The Global Air Transportation Network will continue to play a vital role in their future operations and growth, especially in developing countries.

The future of the global air transportation network is filled with innovation and challenges, and it will be shaped by technology, environmental concerns, etc.....