Unlocking Insights into the Global Air Transportation Network with Tableau

1. INTRODUCTION

1.1 Overview

The 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 include 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 code share stakeholder if any stops required during this journey along with the type of aircraft being used for that particular journey. This dataset has ben compiled through meticulous labour by researches all over the world to give you a comprehensive detail into air transportation networks from around the globe. It requires your generous donations in order for them to keep updating this data source so please do donate if possible.

1.2 Purpose

The business requirement of the Global Air Transportation Network- Airports, Airlines, and Routes dataset is to provide stakeholders in the aviation industry with accurate, up-to-date information on the worldwide air transportation network. The dataset is intended to help stakeholders make informed decisions related to business growth, investment, capacity planning and, and infrastructure development. Using data analytics and visualization tools like Tableau, the dataset can be analysed to identify trends and patterns in the air transportation network, providing valuable insights into the state of the industry. This information can be used to optimize routes, improve operational efficiency, and enhance customer experience. Ultimately, the business requirement of the dataset is to enable stakeholders in the aviation industry to gain a competitive advantage by making data-driven decisions. By providing a comprehensive collection of data related to the air transportation network, the dataset can help stakeholders stay ahead of the curve in a dynamic and rapidly changing industry.

Socially, the dataset can contribute to the development of air transportation networks that are more efficient, safe, and environmentally sustainable. By providing stakeholders with a comprehensive understanding of the air transportation network, the dataset can help to optimize routes and reduce congestion in the air, leading to improved air quality and reduced carbon emissions. This can contribute to the overall well-being of communities around the world, by making air travel more accessible, affordable, and eco-friendly. From a business perspective, the dataset can have a significant impact on the aviation industry. By enabling stakeholders to make data-driven decisions, the dataset can help airlines, airport authorities, tourism boards, and government agencies to identify new business opportunities, optimize capacity planning, and streamline operations. This can lead to increased profitability and competitiveness, as well as improved customer experience. Moreover, the dataset can be used by investors to identify promising sectors and geographic areas for investment in the aviation industry.

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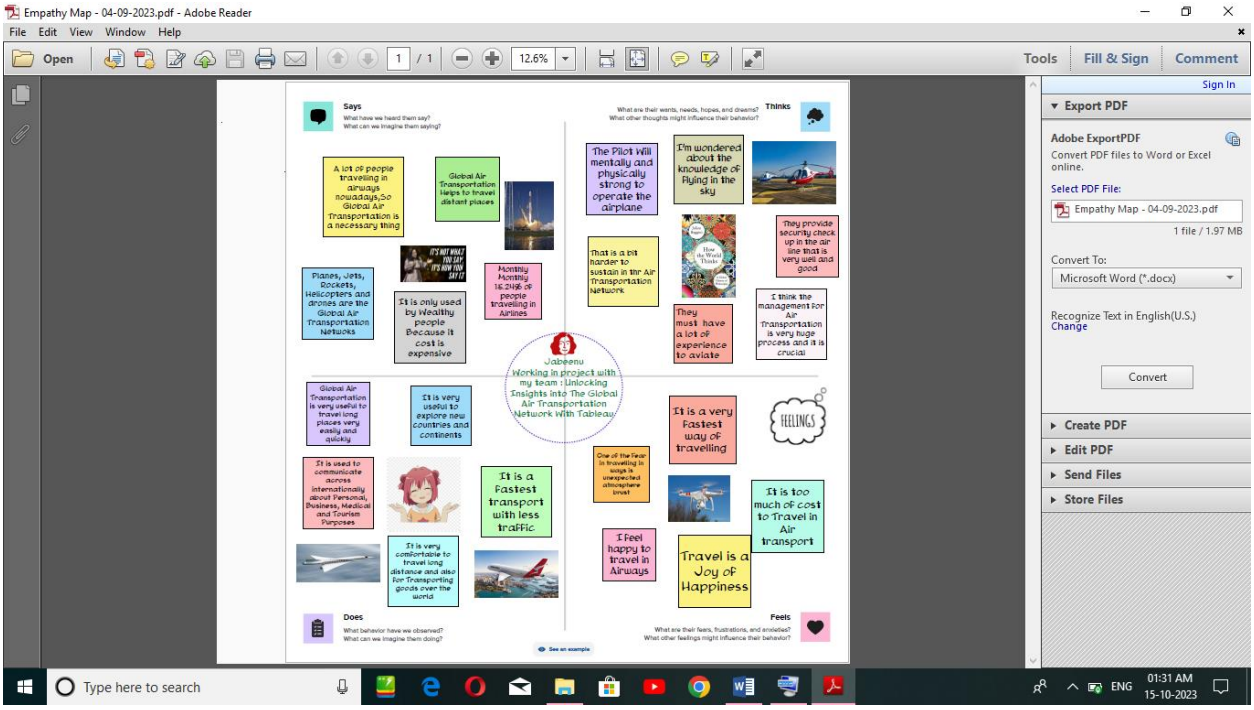
2. Problem Definition & Design Thinking

2.1 Empathy map



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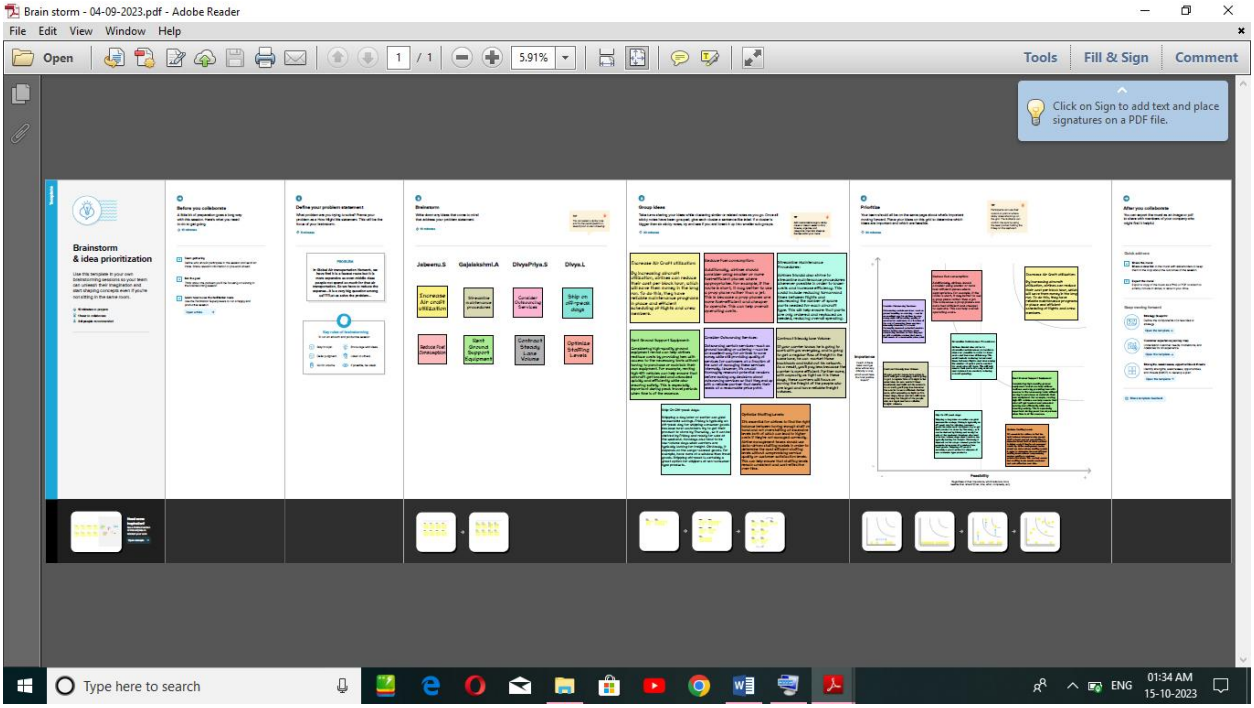
2.2 Ideation & Brainstorming Map



3. RESULT

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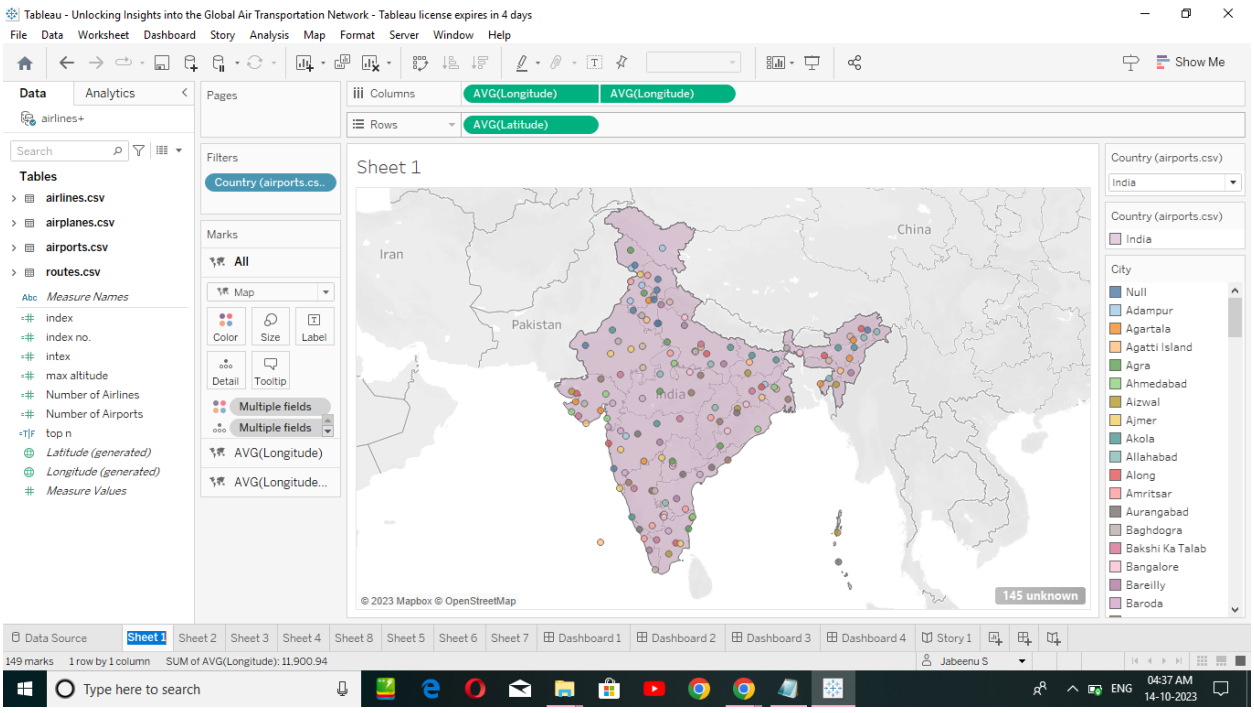

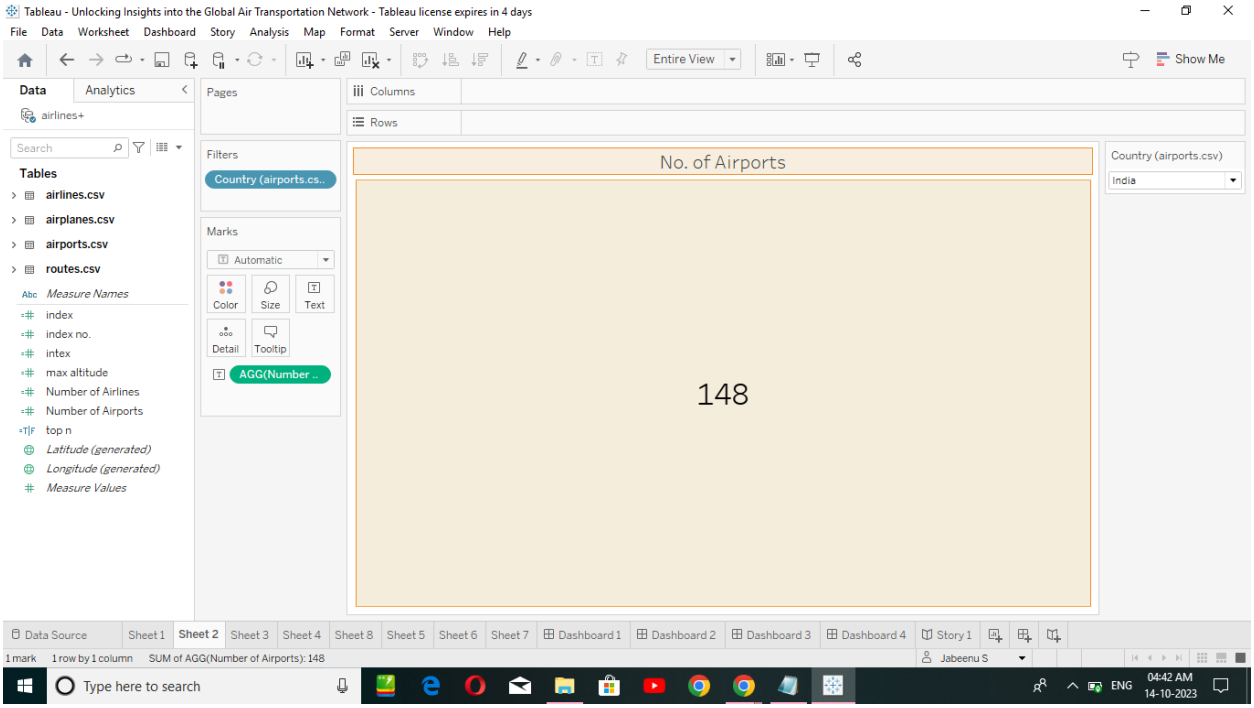

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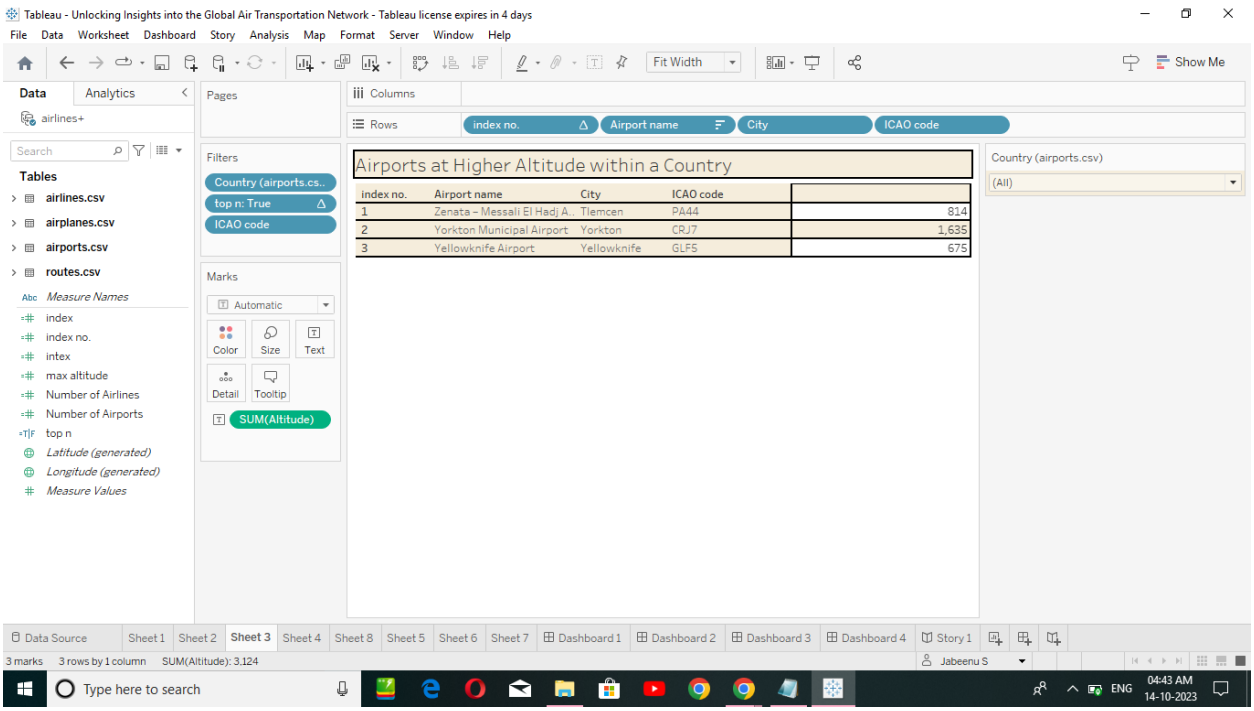

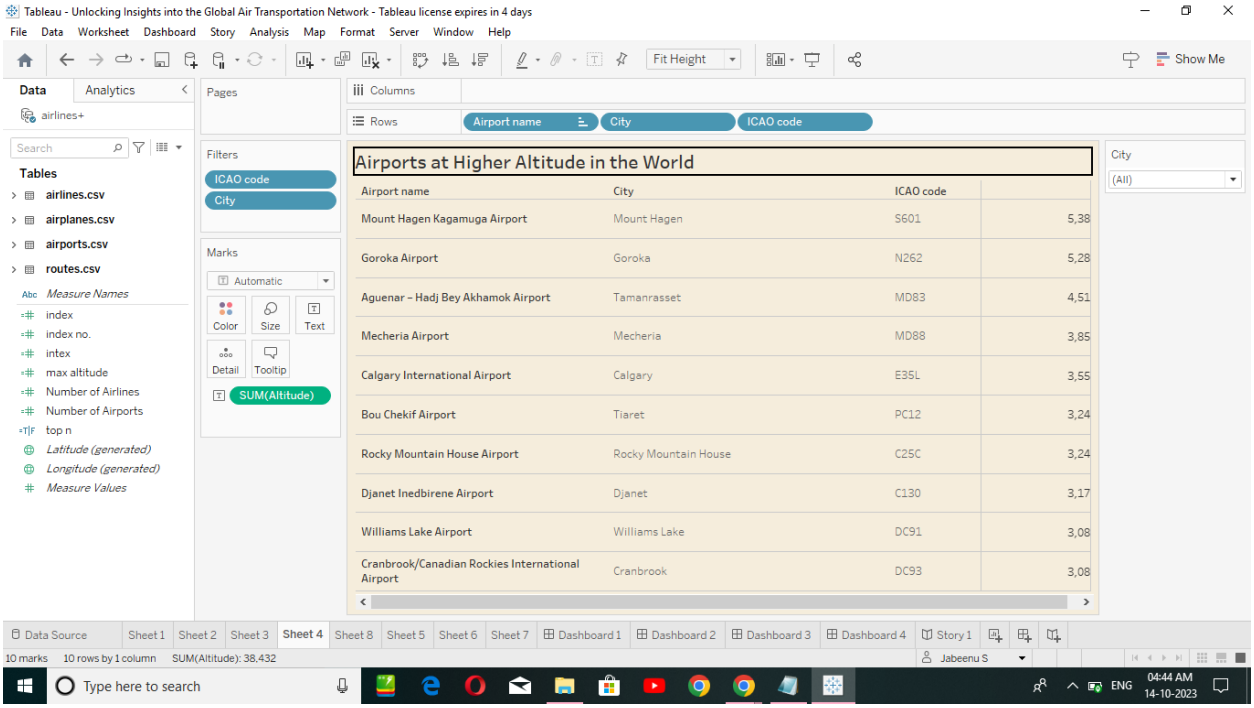

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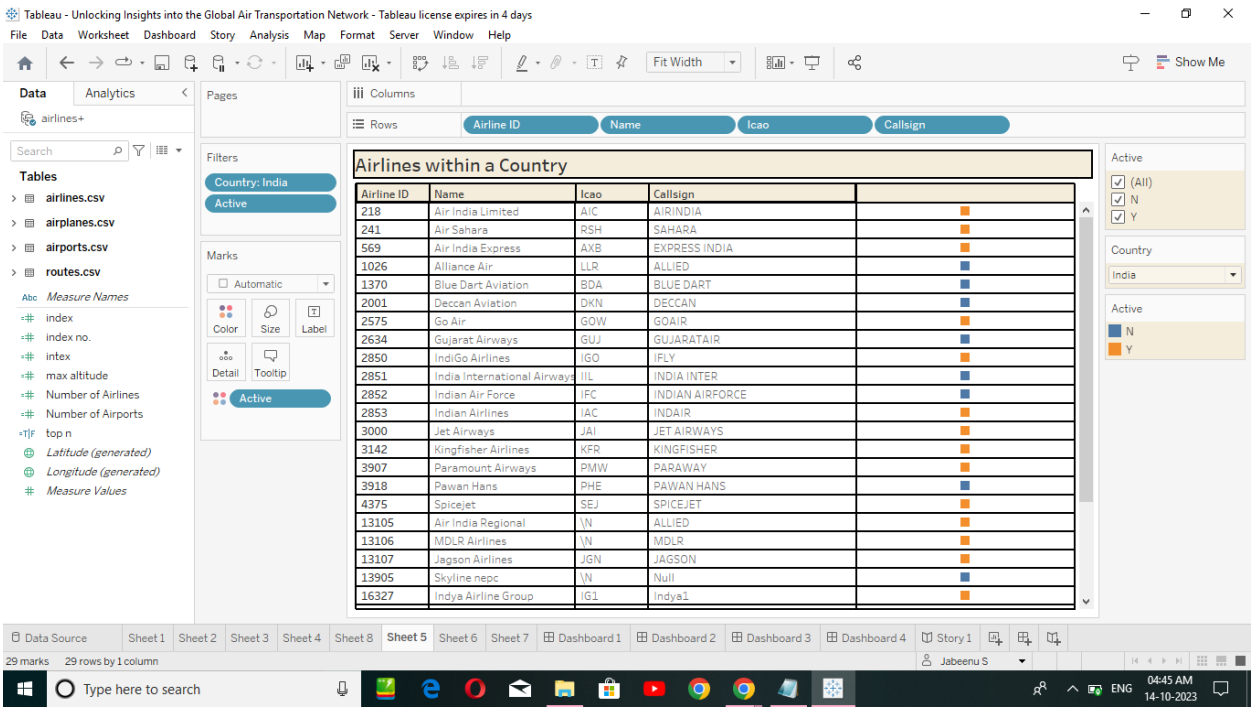

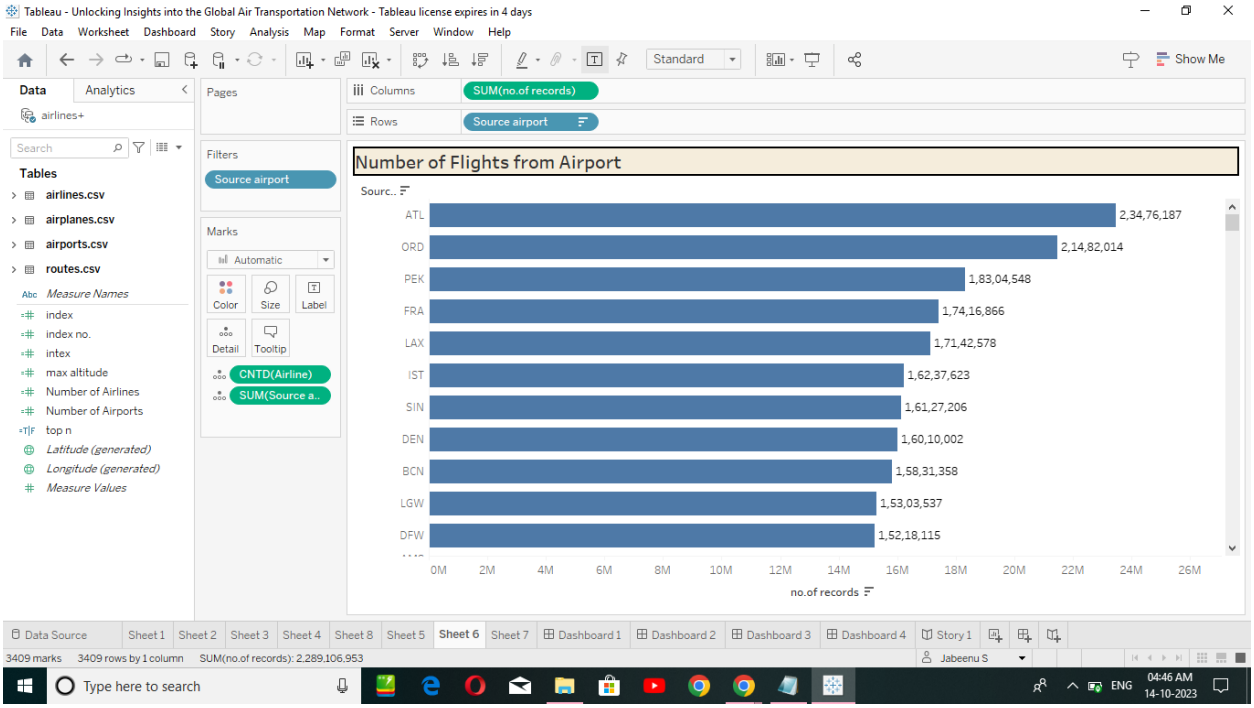

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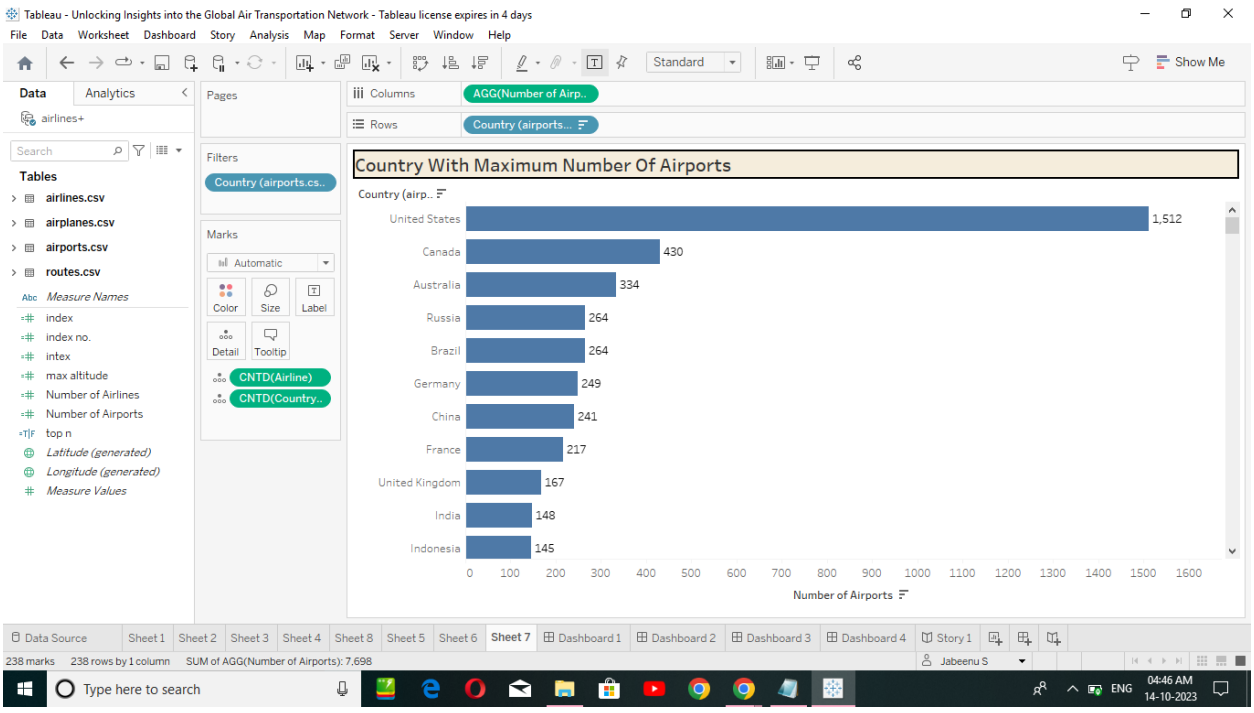

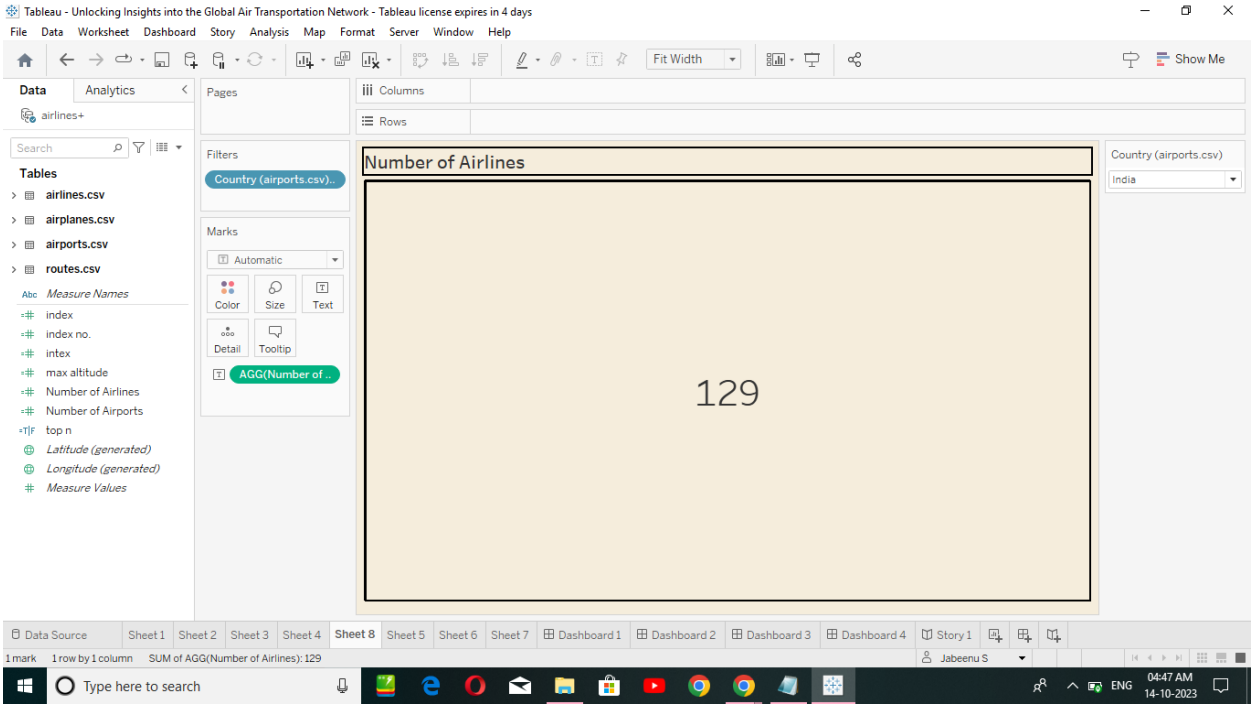

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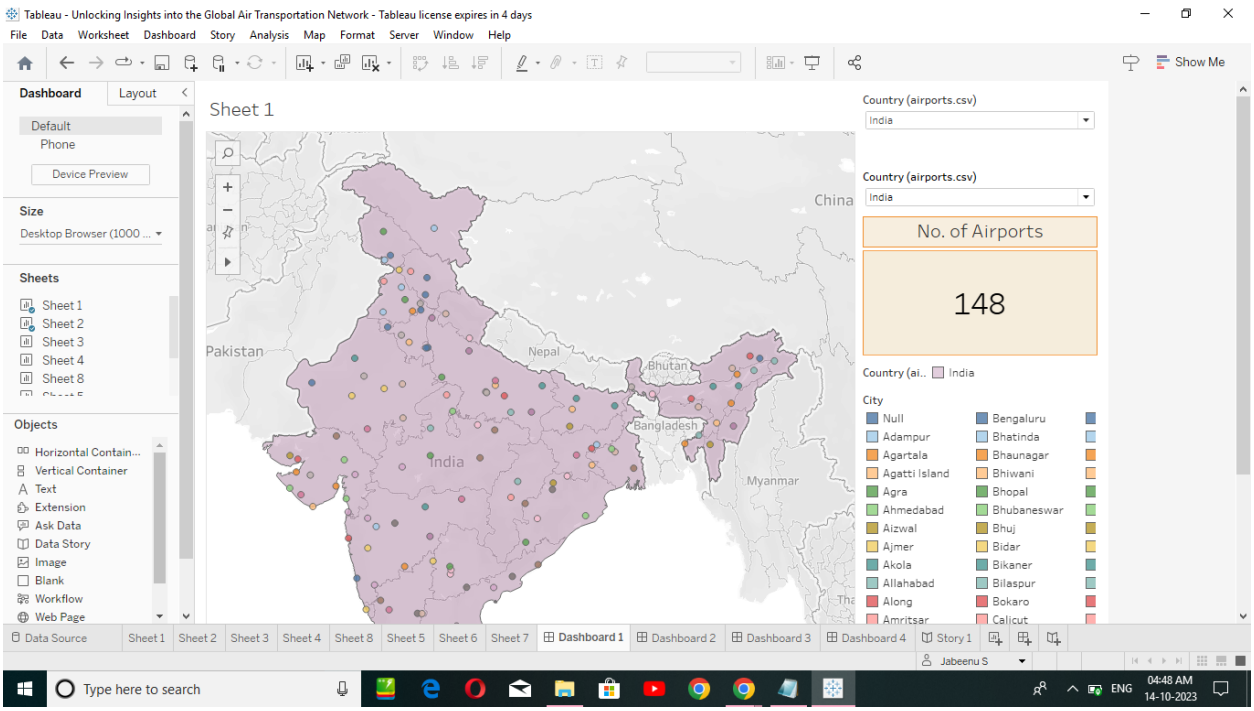

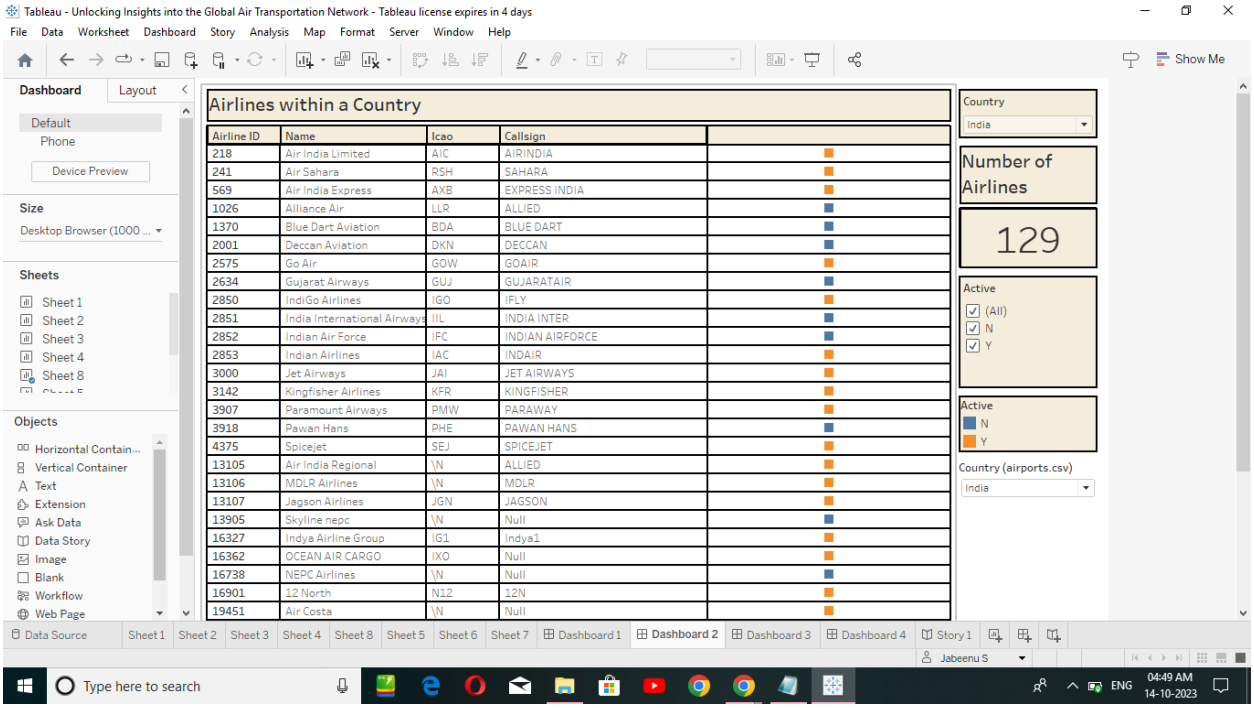

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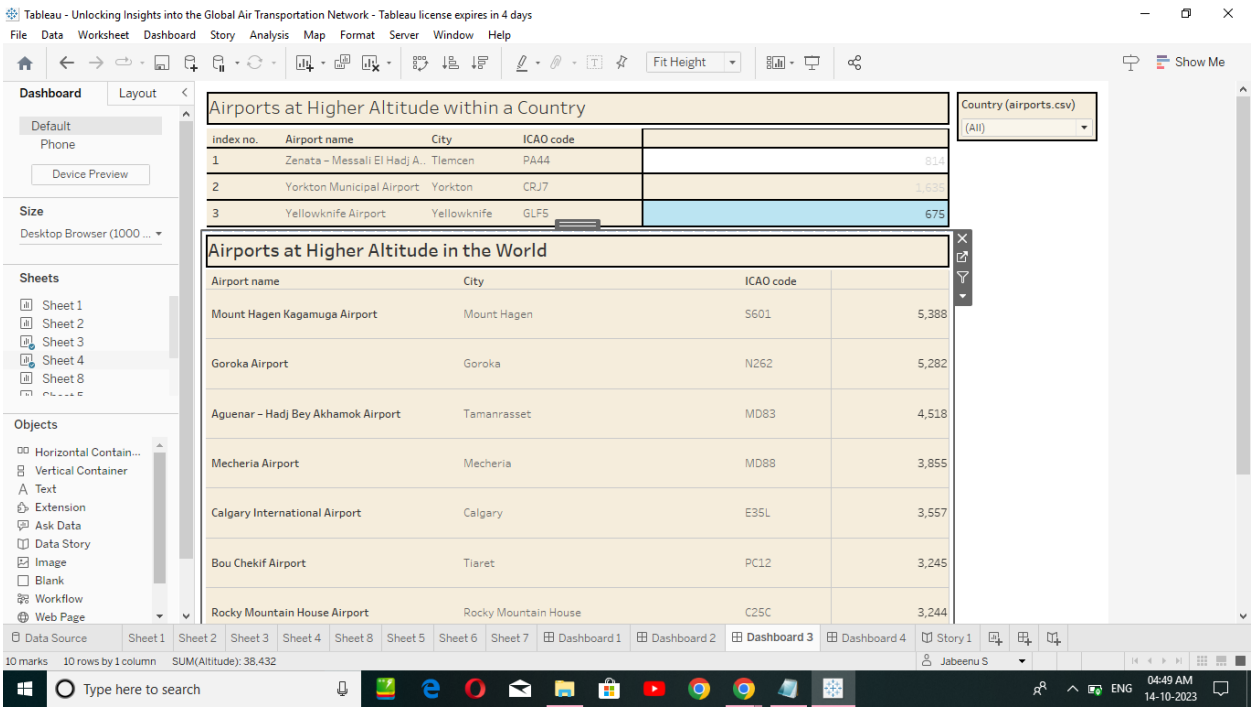

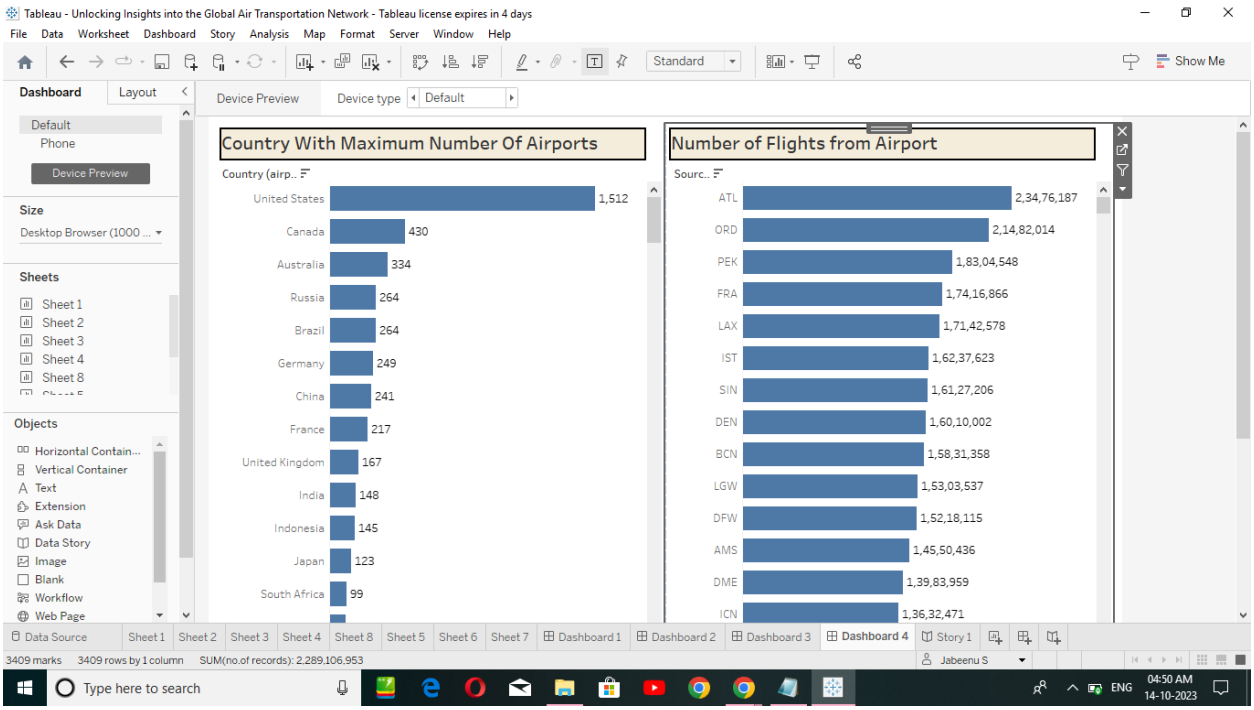

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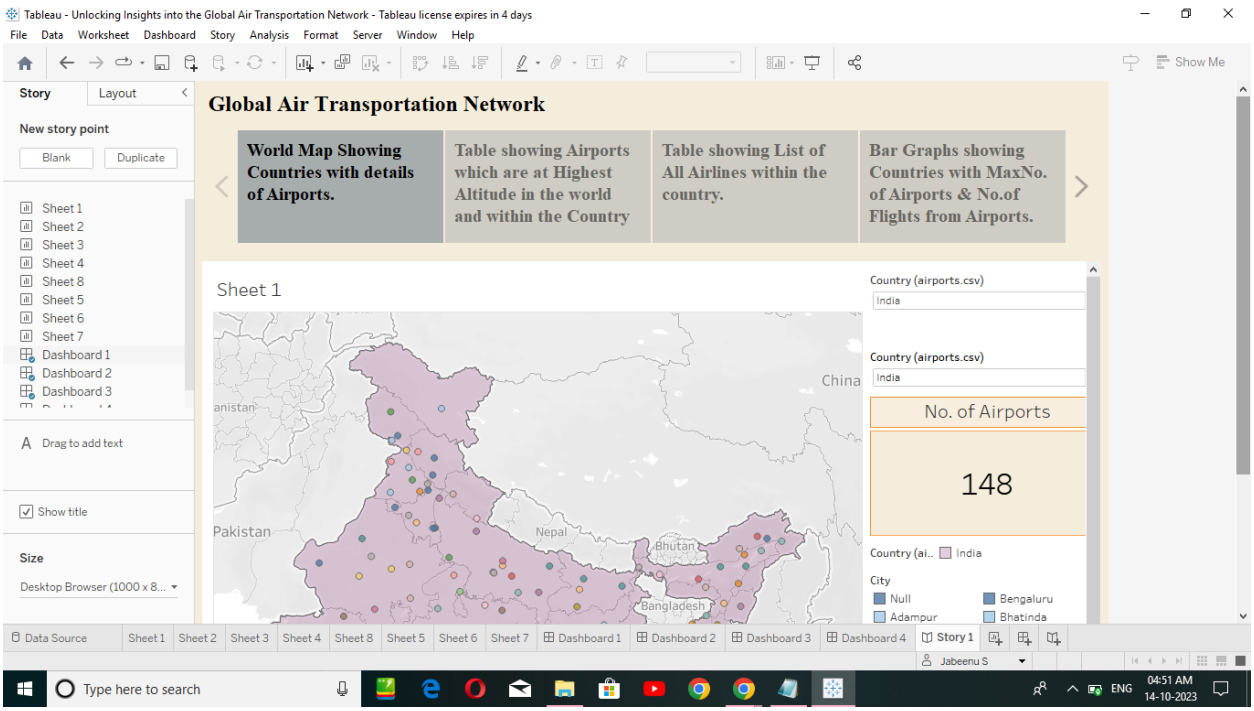

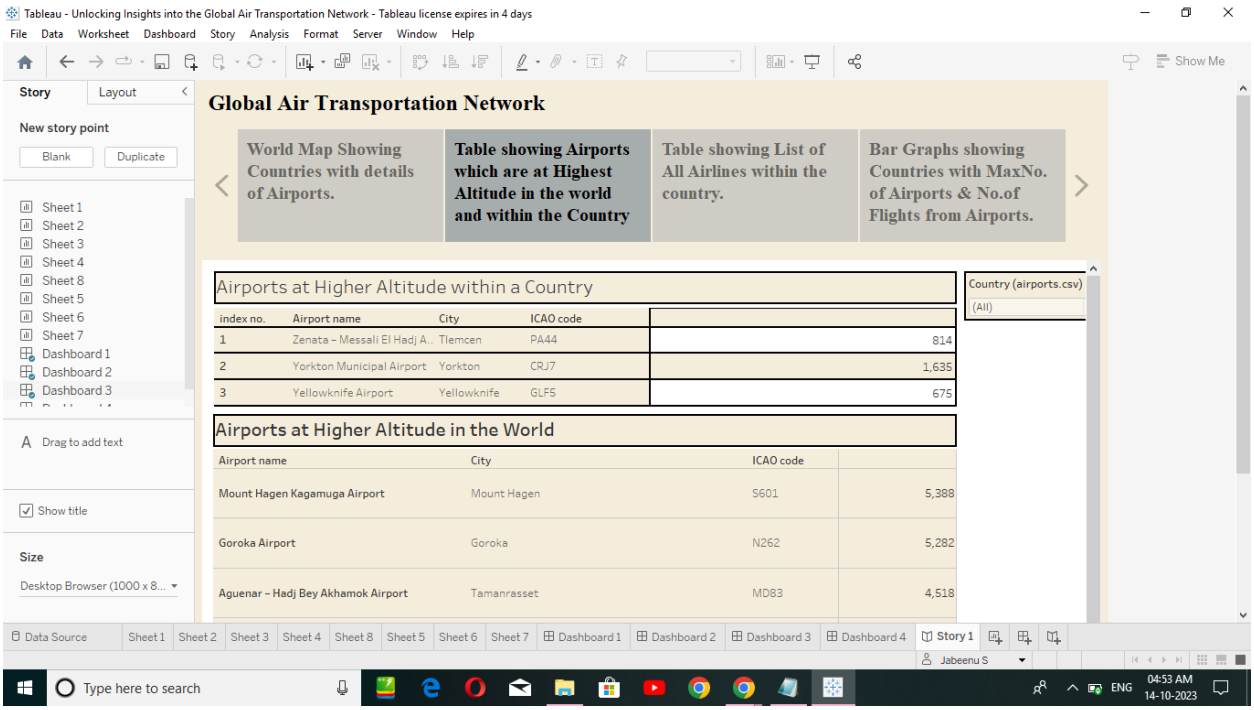

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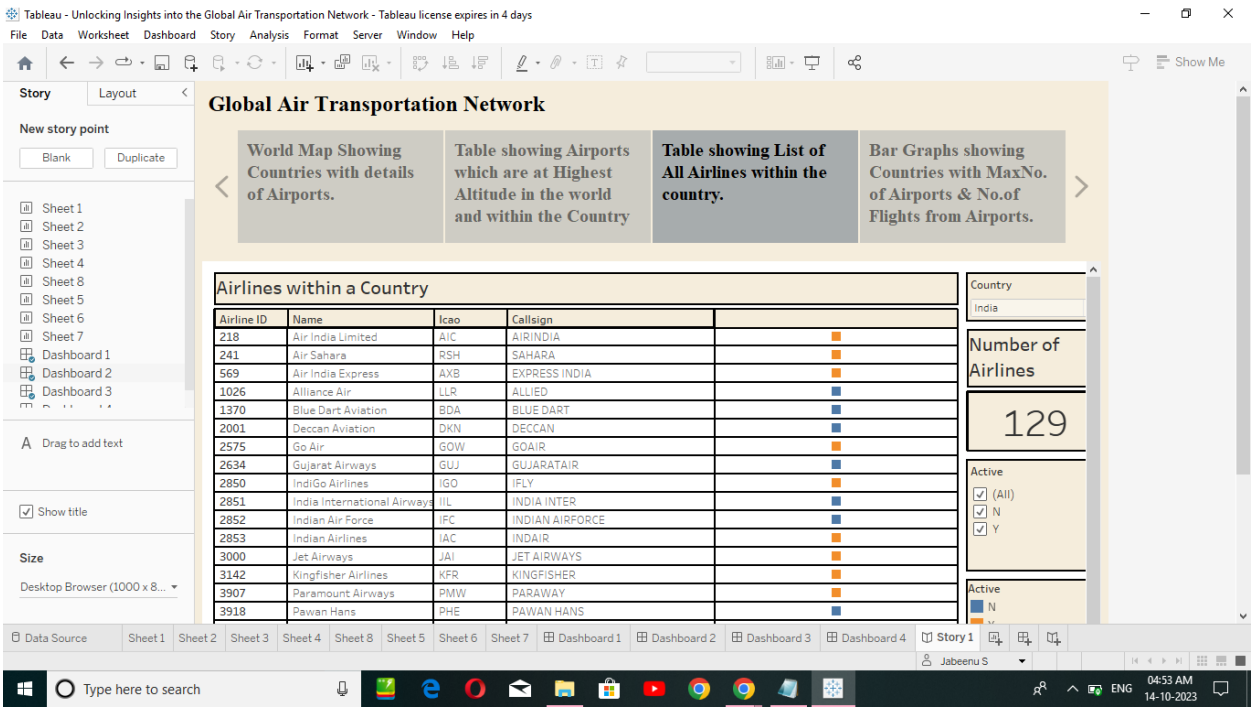

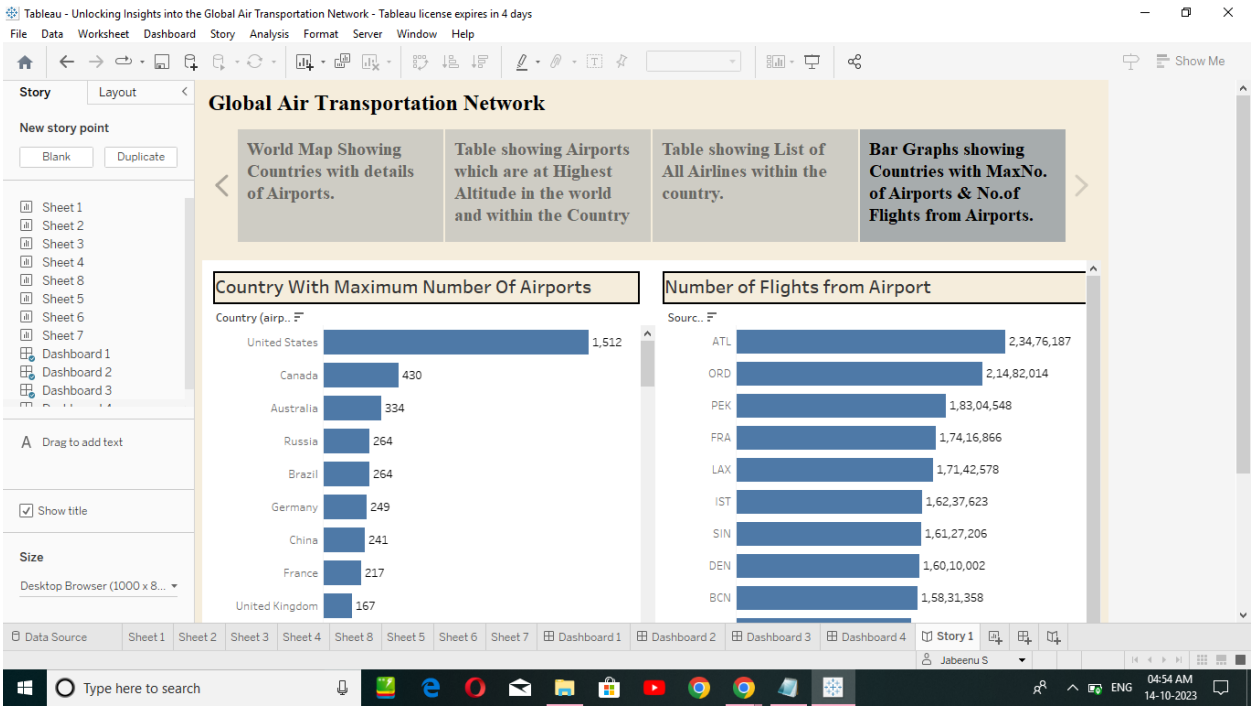

4. ADVANTAGES AND DISADVANTAGES

Advantages of Air Transport:

Speed and Efficiency: One of the key advantages of air transport is its unparalleled speed. Airplanes can cover long distances in a matter of hours, enabling businesses to deliver goods quickly, especially for time-

sensitive orders. This swift transportation option is particularly beneficial for industries such as e-commerce, pharmaceuticals, and perishable goods.

Global Reach

Air transport provides extensive global coverage, connecting businesses to various destinations around the world. It allows companies to expand their customer base and reach new markets, irrespective of geographical barriers. This enables businesses to tap into international opportunities and access a broader range of customers.

Reliable Timelines

Air transport operates on fixed schedules, ensuring reliable timelines for delivery. Airlines maintain strict adherence to departure and arrival times, minimizing delays and enhancing supply chain efficiency. This reliability is crucial for businesses that require precise order preparation and fulfilment to meet customer expectations.

Reduced Inventory Holding Costs

The fast transit times offered by air transport help reduce inventory holding costs. With shorter lead times, businesses can maintain lower inventory levels while still meeting customer demands. This frees up working capital and minimizes storage expenses, contributing to overall cost savings.

Enhanced Security

Air transport offers enhanced security measures compared to other modes of transportation. Airports have stringent security protocols in place to ensure the safety of cargo, including thorough screening processes and restricted access. This helps protect valuable and sensitive products during transit, reducing the risk of theft or damage.

Disadvantages of Air Transport

Higher Cost

One of the significant drawbacks of air transport is its higher cost compared to other modes, such as sea or land transport. Air freight charges are generally higher due to factors like fuel costs, infrastructure investments, and handling fees. Businesses must carefully evaluate the cost-benefit analysis of air transport based on their specific needs and budget.

Limited Capacity

Airplanes have limited cargo space compared to ships or trains. This limited capacity can pose challenges for businesses dealing with bulky or oversized shipments. Air transport is best suited for high-value, time-sensitive goods that require swift delivery, rather than large-volume shipments.

Restrictions on Hazardous Goods

Air transport has strict regulations regarding the transportation of hazardous goods. Certain hazardous materials or substances may be prohibited from being transported by air due to safety concerns. Businesses dealing with such goods need to comply with stringent regulations and find alternative transportation methods if necessary.

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Understanding the advantages and disadvantages of air transport is crucial for businesses seeking efficient order preparation and global shipping solutions. The speed, global reach, reliable timelines, reduced inventory holding costs, and enhanced security make air transport an attractive option for many companies. However, it is essential to consider the higher cost and limited capacity associated with air transport.

For expert guidance and comprehensive logistics solutions, consider partnering with IFS International Logistics Operator. With their extensive experience in air freight and supply chain management, they can provide tailored solutions to optimize your order preparation and ensure seamless transportation. Contact IFS International Logistics Operator today to discuss your logistics requirements and discover how they can enhance your supply chain operations.

5. Applications

The worldwide air transportation network is a critical infrastructure with high impact on mobility, trade and economy. Another examples are the air transport systems of a country or a country's own air transport company.

What is the role of information technology in aviation? Information technology system supports a lot of functions including reservation management, ticketing, and inventory management. The Airline Company has a number of branches and distributors over the globe.

Air transport is one of the fastest modes of public transport which connects international boundaries. Air transport allows people from different countries to cross international boundaries and travel other countries for personal, business, medical, and tourism purposes.

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.

6. Conclusions

Project Name: Unlocking Insights into the Global Air Transportation Network

In this project, I conclude Story of 4 Titles

- World Map Showing Countries with details of Airports
- Table showing Airports which are at Highest altitude in the world and within a country
- Table showing List of All airlines within a Country
- Bar Graph showing Countries with Max.no of Airports & no. of Flights from Airport

7.Future Scope

The most recent estimates suggest that demand for air transport will increase by an average of 4.3% per annum over the next 20 years. If this growth path is achieved by 2036 the air transport industry will then contribute 15.5 million in direct jobs and $1.5 trillion of GDP to the world economy.

The industry has a number of domestic and international airlines, as well as a large network of airports. The future of the aviation industry in India is likely to see continued growth and expansion, driven

by factors such as a growing middle class, increased tourism, and government policies supporting the industry.