Unlocking Insight Into The Global Air Transportation Network With Tableau

Project submitted by:-

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Introduction

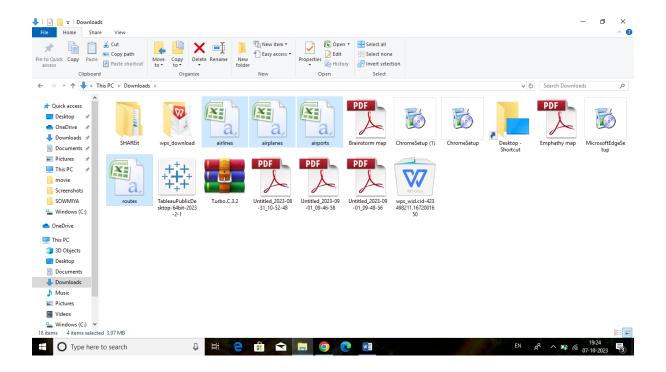
Air transport networks are complex networks that span across multiple distance scales (from a few km to 10,000 km) and multiplex together over 5000 airline operators and has strong interdependencies with socioeconomic drivers. The air transport network carry 3.5 bn passengers per year and generate over 30 m jobs globally. The analysis of air transport networks to better understand its network properties goes back for over 10 years [1-4]. Both global and regional studies have explored their complex network structure across dilerent network scales [5-7] with multi-layer analysis [6, 8]. The analysis predominantly focus on robustness from attacks or failures 10], eliciency [4], and structural evolution [7]. The transportation network is also responsible for the propagation of knowledge and culture [11], infectious diseases [12-16], and understand-ing the network properties allows scientists to better estimate the intangible bene ets and risks of global transportation. A detailed review of existing literature will be given in each relevant section of analysis in this paper.

Milestone 1: Define Problem/Problem Understanding

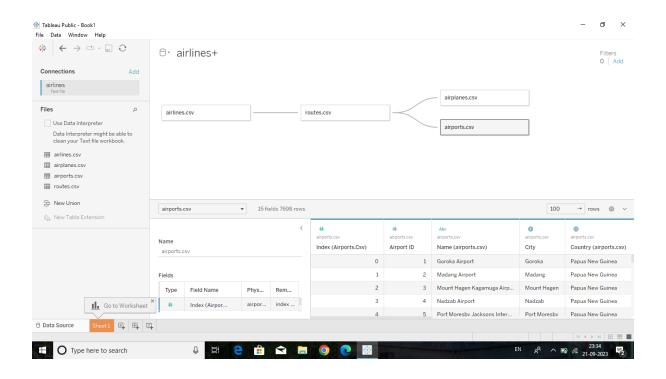
Activity 1: Specify the business problem

Milestone 2: Data Collection & Extraction

Activity1: Collect the dataset

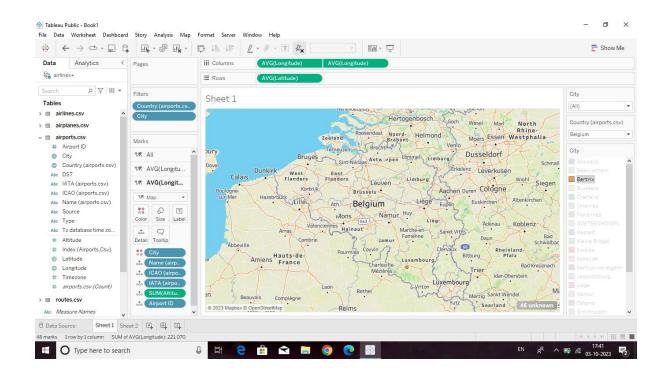


Activity 2: Connect datasets State & Country with Tableau



Milestone 3: Data Preparation

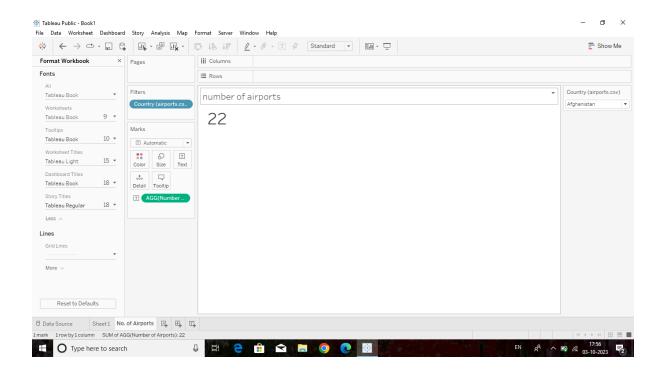
Activity 1: Prepare the Data for Visualization



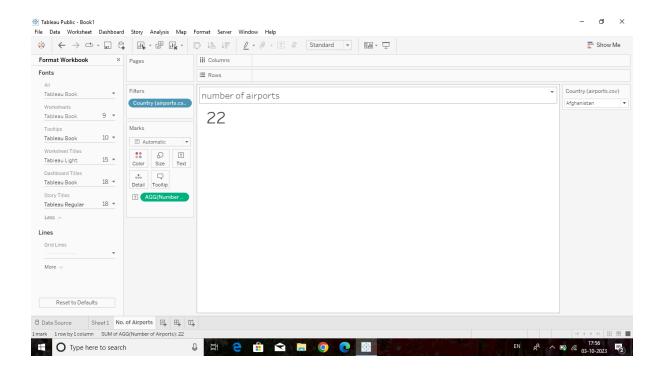
Milestone 4: Data Visualization

Activity 1: No of Unique Visualizations

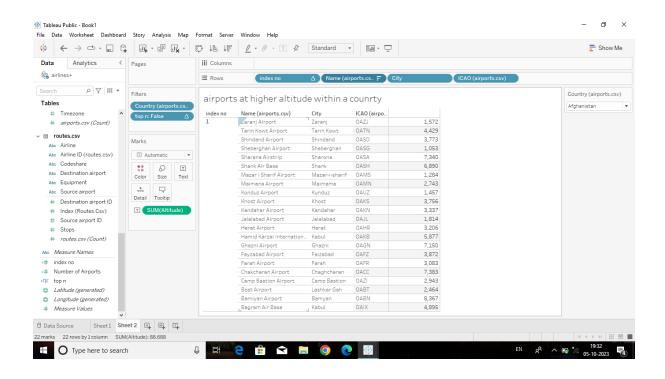
Activity 1.1: World map showing details of all Airports within a country



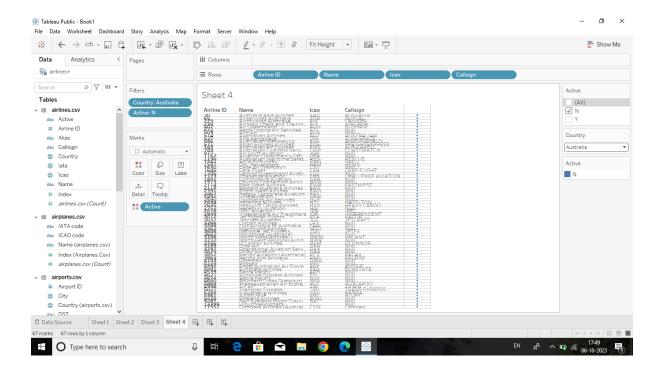
Activity 1.2: Number of Airport within the country



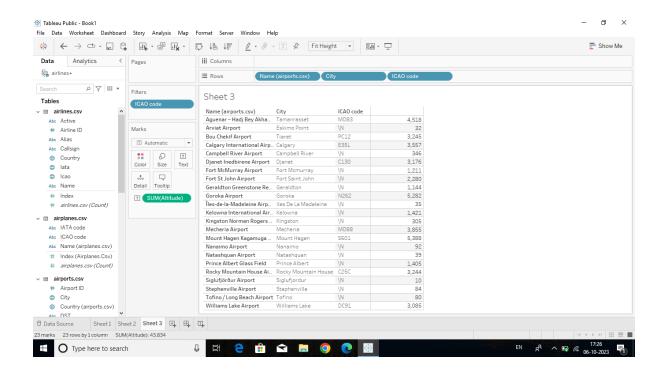
Activity 1.3: Airports at Higher altitude within a country



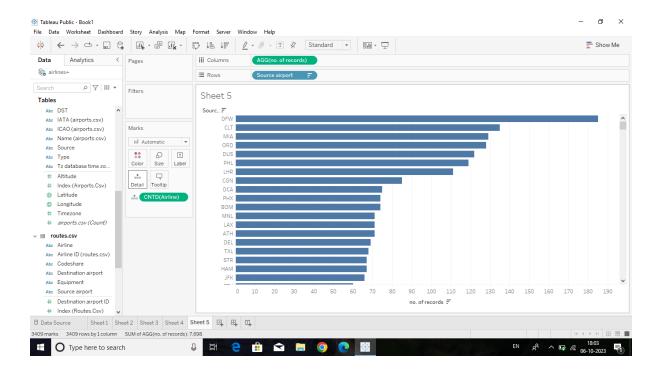
Activity 1.4: Airports at Higher altitude in world



Activity 1.5: Airlines within a country

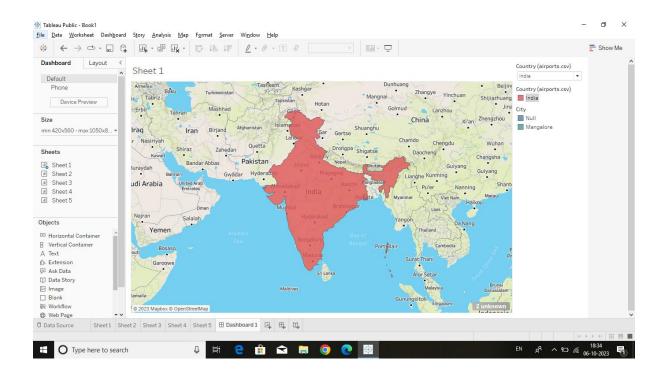


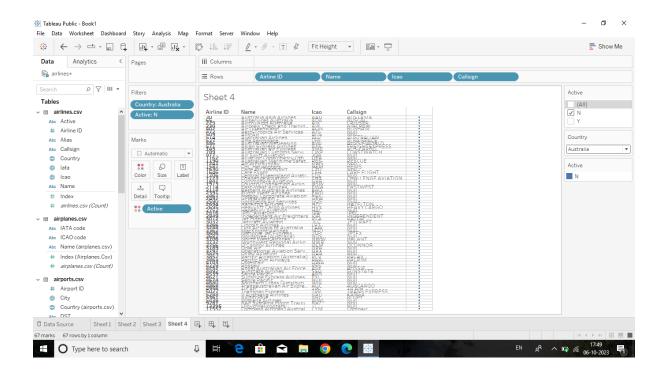
Activity 1.6: Number of flights from airport

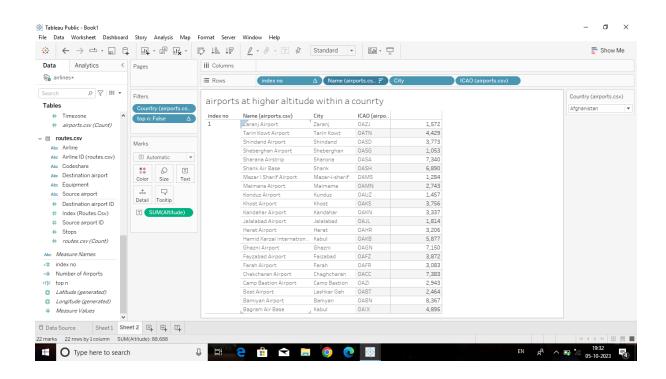


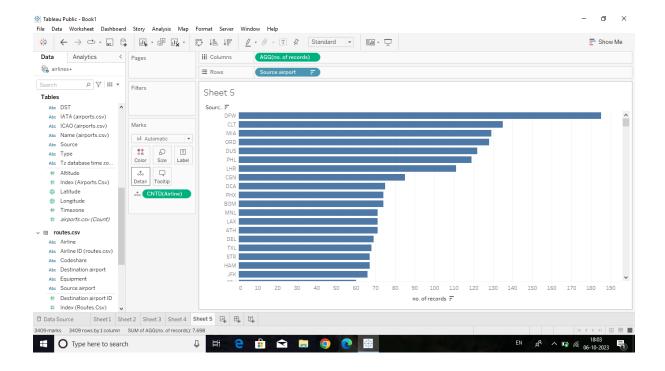
Milestone 5: Dashboard

Activity 1: Responsive and Design Dashboard



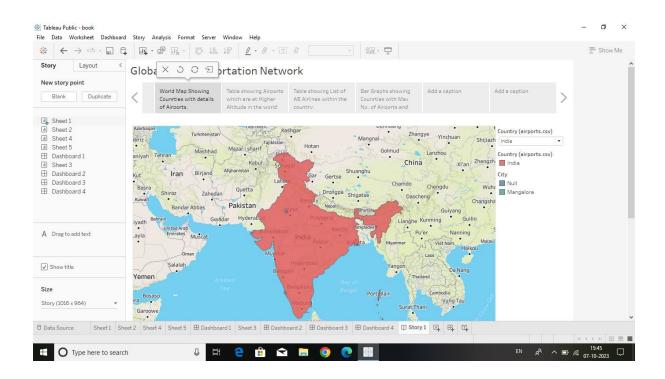


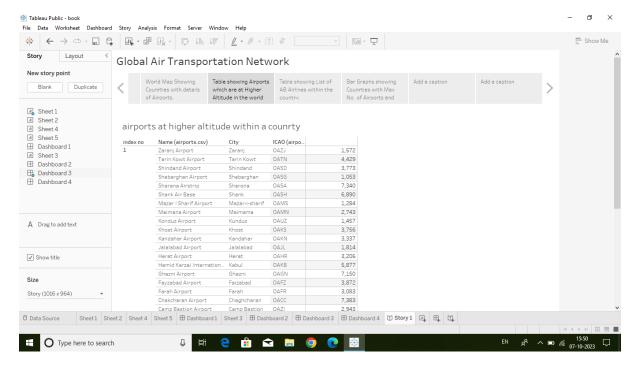




Milestone 6: Story

Activity 1: No of Scenes of story

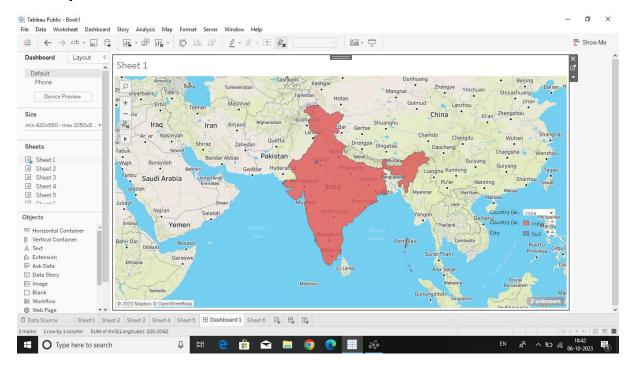


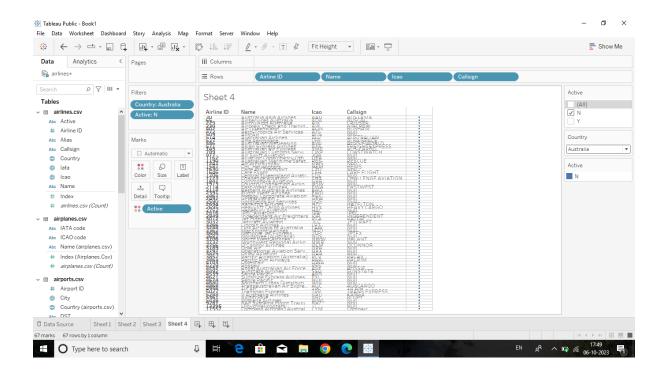


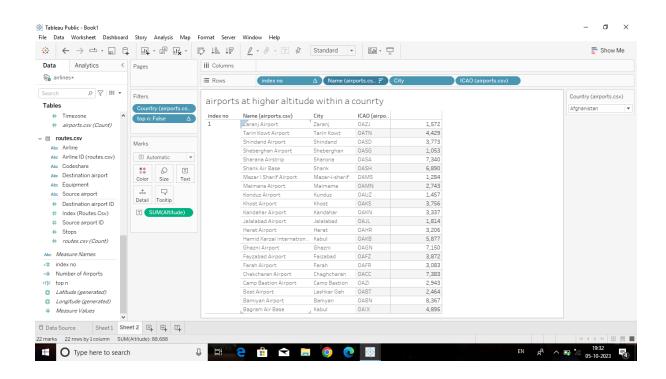
Milestone 7: Performance Testing

Activity 1: Amount of Data Rendered to tableau

Activity 2: Utilization of Filters

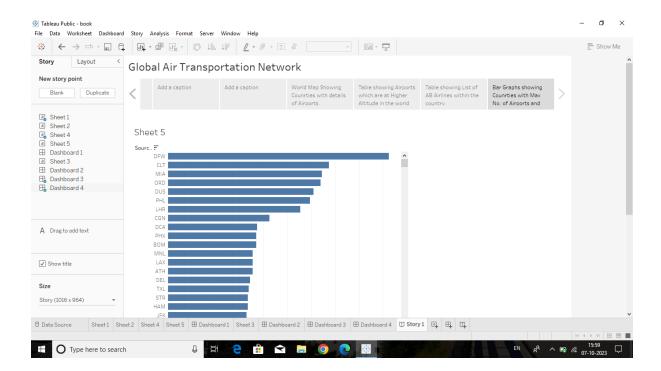




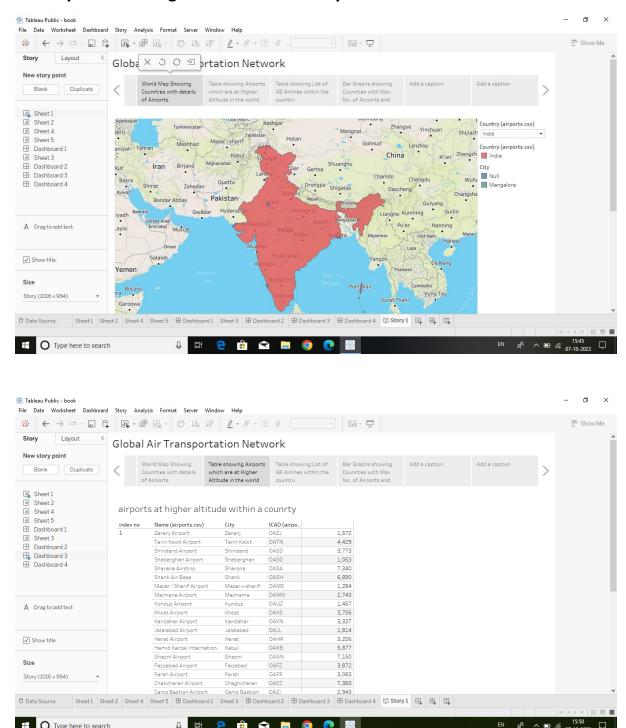


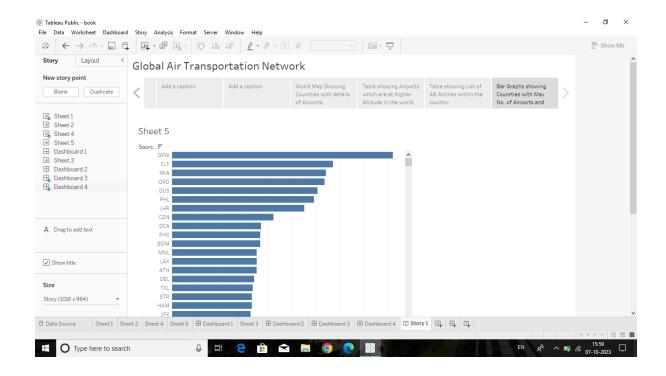
Milestone 8: Publishing

Publishing help us to track and monitor key performance metrics, to communicate results and progress. Help a publishing stay informed, make better decisions, and communicate performance to others.



Activity 1: Publishing Dashboard and story to Tableau Public Server





Milestone 9: Project Demonstration & Documentation

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 fulfillment 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.

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.

Conclusion

Finally, the air transport sector has become very challenging and complex with an ever increasing demand for both technical and managerial skills. There is a general lack of sufficiently trained human resources in the region, given the rapid expansion of air services. One instrument to address this issue could be the ACIICAO Airport Management Professional Accreditation Programme (AMPAP), which is a well-structured training course that can be undertaken by airport professionals in a three year period while continuing in their professions.