

# **UNLOCKING INSIGHTS INTO THE GLOBAL AIR TRANSPORTATION NETWORK WITH TABLEAU**

## **1 INTRODUCTION:**

### **1.1 Overview:**

The air transportation network is a complex network which has the properties of small-world networks and scale-free networks. The degree distribution of the nodes displays a heavy-tailed distribution. The hubs of the network have large connectivities and long-distance connectivities at the same time.

### **1.2 Purpose:**

The air transport network is a key infrastructure asset. It is the only worldwide passenger and cargo transportation network, providing an essential link between individual countries and the wider global economy. Air services create significant value for passenger and freight users.



## 2 PROBLEM DEFINITION AND DESIGN THINKING:

### 2.1 Empathy Map



### 2.2 Ideation & Brainstroming Map

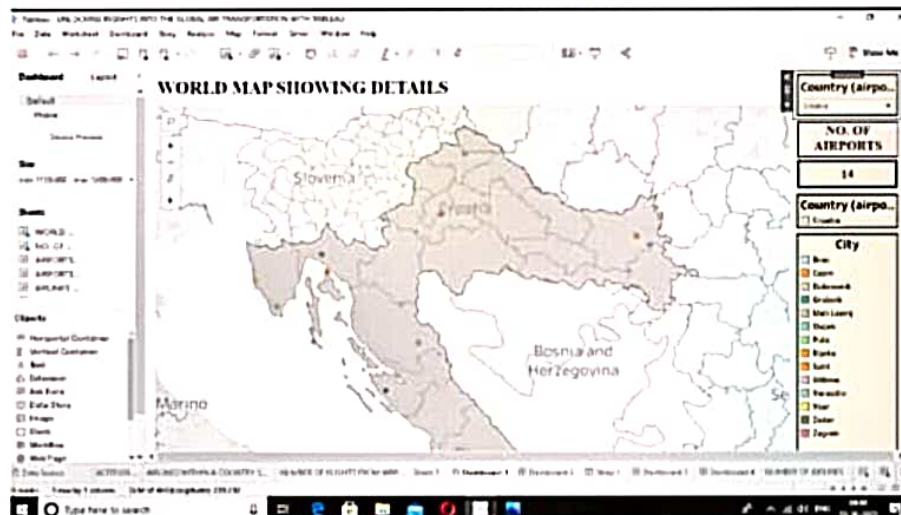


## 3 RESULT:

We created the data visualization such as dashboard and story using the dataset provided.

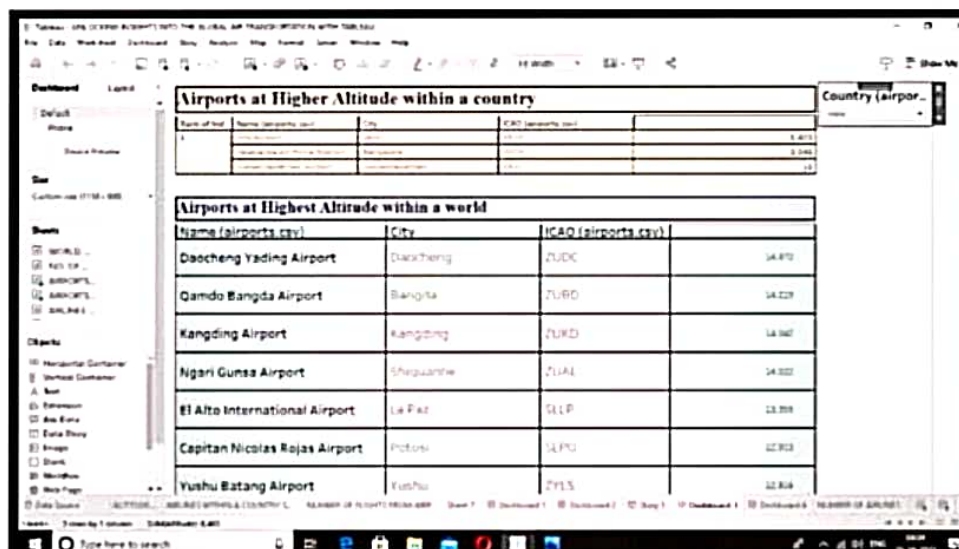
### DASHBOARD 1:

Dashboard 1 by Vishnu Priya A.S



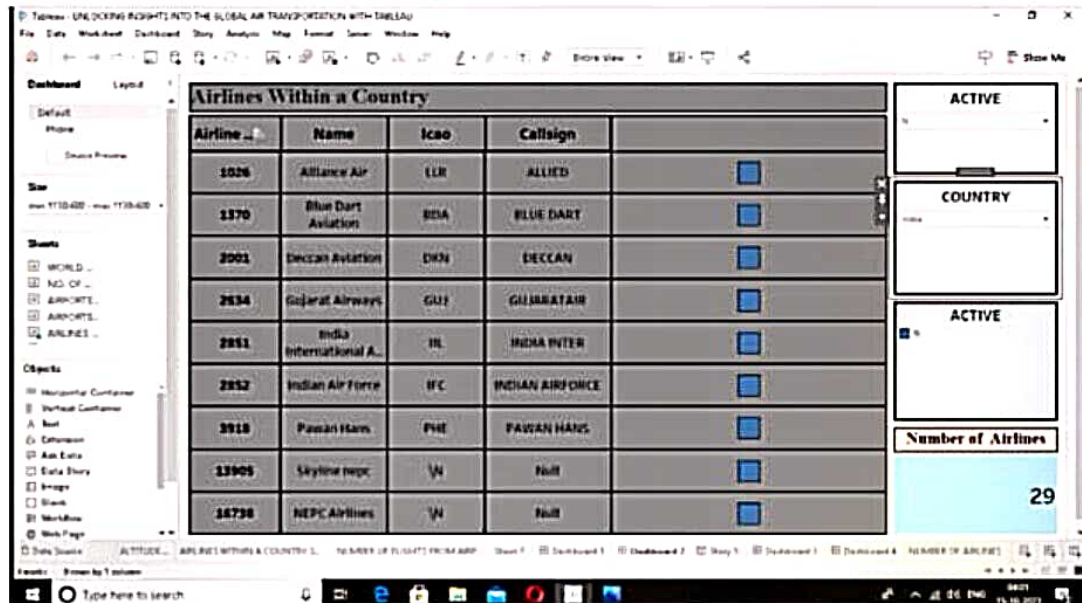
### DASHBOARD 2:

Dashboard 2 by Vishnu Priya A.S



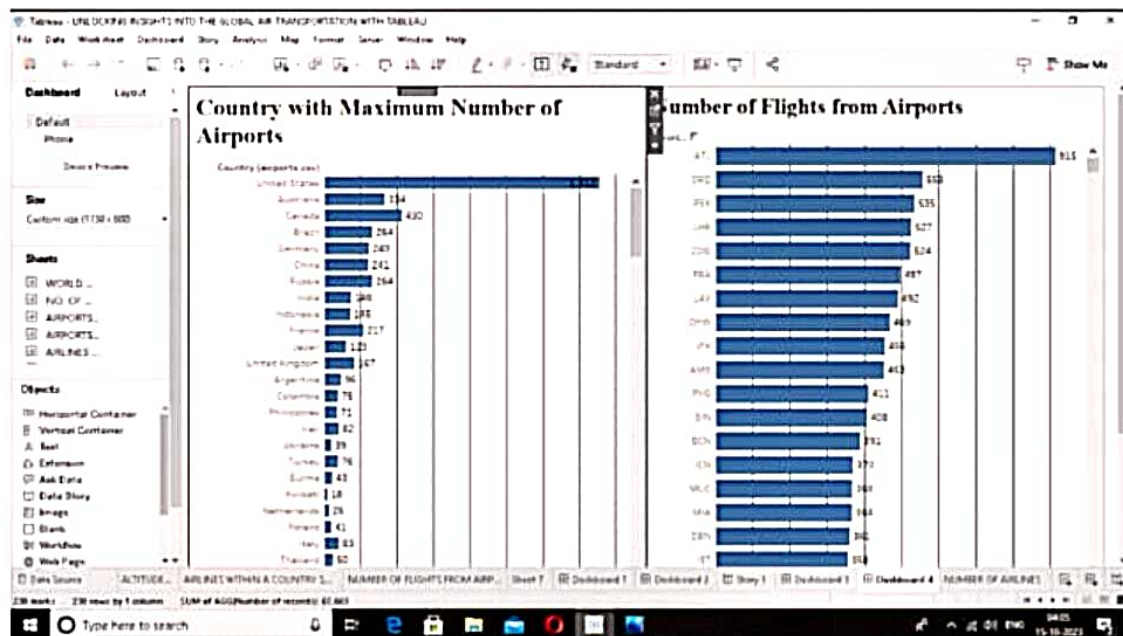
## DASHBOARD 3:

Dashboard 3 by Vishnu Priya A.S



## DASHBOARD 4:

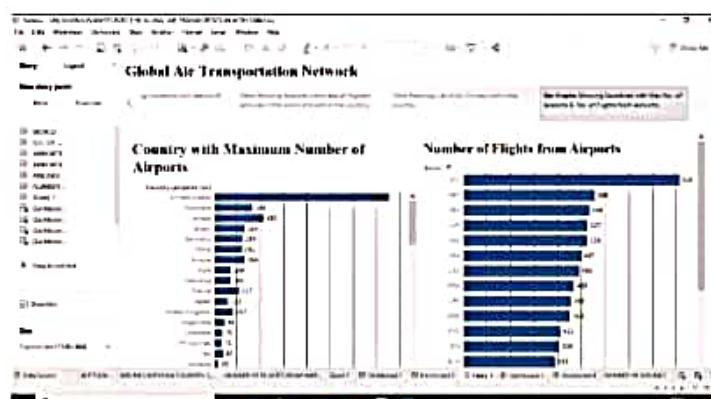
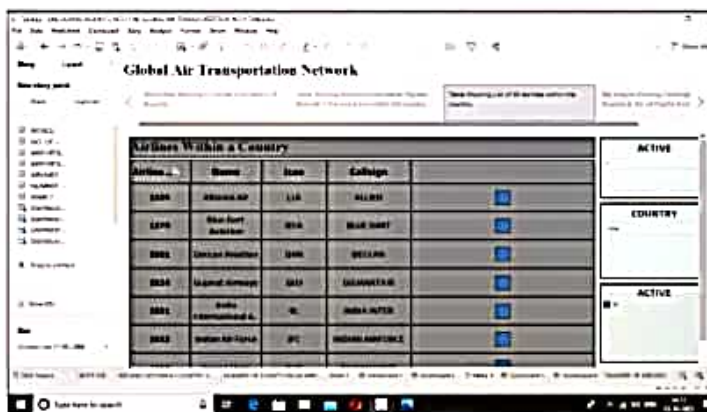
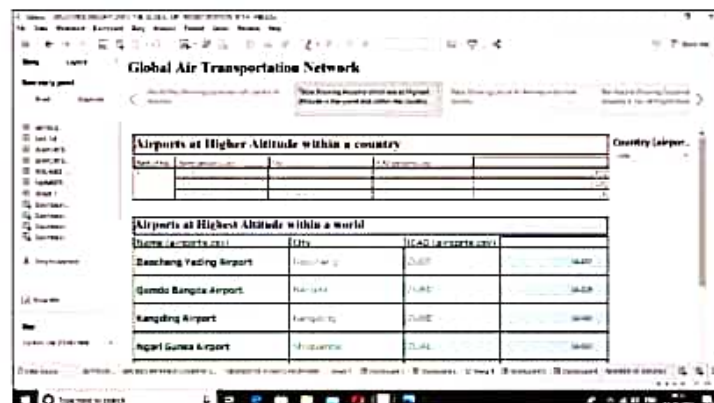
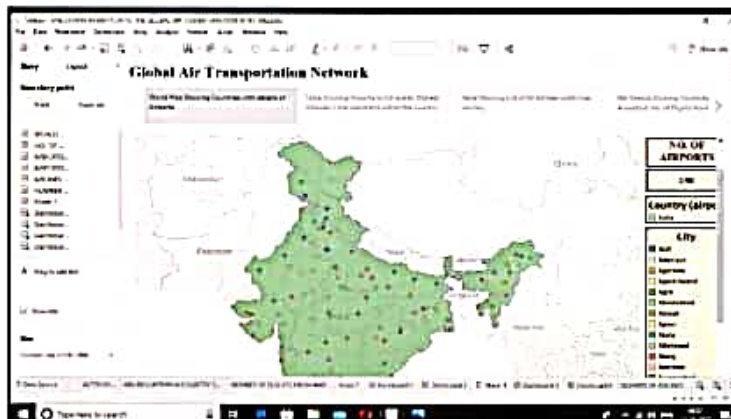
Dashboard 4 by Vishnu Priya A.S





## STORY:

Story by Vishnu Priya A.S



## 4 ADVANTANGES & DISADVANTAGES :

### **ADVANTAGES :**

- High standard of protection with a low risk of robbery and injury. Shipping by air has a high degree of security since airport safety restrictions on cargo are strictly enforced.
- An aircraft can fly to any location without seeing any natural obstacles or barriers. Since customs formalities are easily compiled.
- It is the quickest transport mode and is therefore ideal for long-distance transport of goods. It takes less time.
- It also calls for professional, qualified and qualified staff that need a significant investment.

### **DISADVANTAGES :**

- The aircraft have no room and therefore are not ideal for carriage of voluminous and cheaper materials.
- Air travel is the riskiest mode of transport, since there can be considerable losses to goods, customer and crews as a result of a minor crash.
- Extreme weather will cause planes to be grounded and airports to close, halting shipments for several days and rendering the service ineffective.
- Air travel is considered to be the most expensive means of transportation. The cost of maintaining aircraft is higher

**5 APPLICATIONS:**

The following applications can provide valuable insights to the Global Air Transportation information.

- It is used for various purposes, such as business and leisure travel, the delivery of time-sensitive goods, and emergency response and rescue missions.
- Generate and support jobs, strengthen trade and connectivity between people and countries, promote tourism, and connect remote communities.
- Recreational usage of hot air balloons, blimps, gliders, hang gliders and other types of air travel is an option.
- Air transport facilitates integration into the global economy and provides vital connectivity on a national, regional, and international scale.
- This network of air routes enables swift and efficient travel for business, tourism, and diplomatic purposes, fostering stronger global ties.

## **6 CONCLUSIONS:**

### **☆ Define problem/ Problem Understanding**

- No. of Airports & Airlines
- World Map Details
- Maximum no. of flights

### **☆ DATA COLLECTION & EXTRACTION**

- Collect the dataset
- Connect dataset with Tableau

### **☆ Data Preparation**

- Prepare the data for visualizations

### **☆ Data Visualizations**

- No. of Unique Visualizations

### **☆ Dashboard**

- Response and design of Dashboard

### **☆ Story**

- No. of scenes of Story

### **☆ Performance Testing**

- Utilizations of data filters
- No. of Visualizations/ Graphs

### **☆ Project Demonstration & Documentations**

- Record explanation Video for project end to end solution.

By this we can conclude our project.



## **Project Report Titles**

### **7 FUTURE SCOPE:**

The future scope for a Unlocking Insights into the Global Air Transportation Network with Tableau. The industry has a number of domestic and internal 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 growing middle class, increased tourism, and government policies supporting the industry. The market size of the aviation industry in India has grown significantly in recent years, driven by a combination of factors, which is expected to drive demand for air travel. These airlines offer low fares and often operate on smaller, regional airports, which makes them appealing to price-sensitive travelers. In the world has No. of Airports & Airlines, Maximum no. of Flights from country and Global Mapping facilities.