

PROJECT REPORT

1. INTRODUCTION

1.1 OVERVIEW

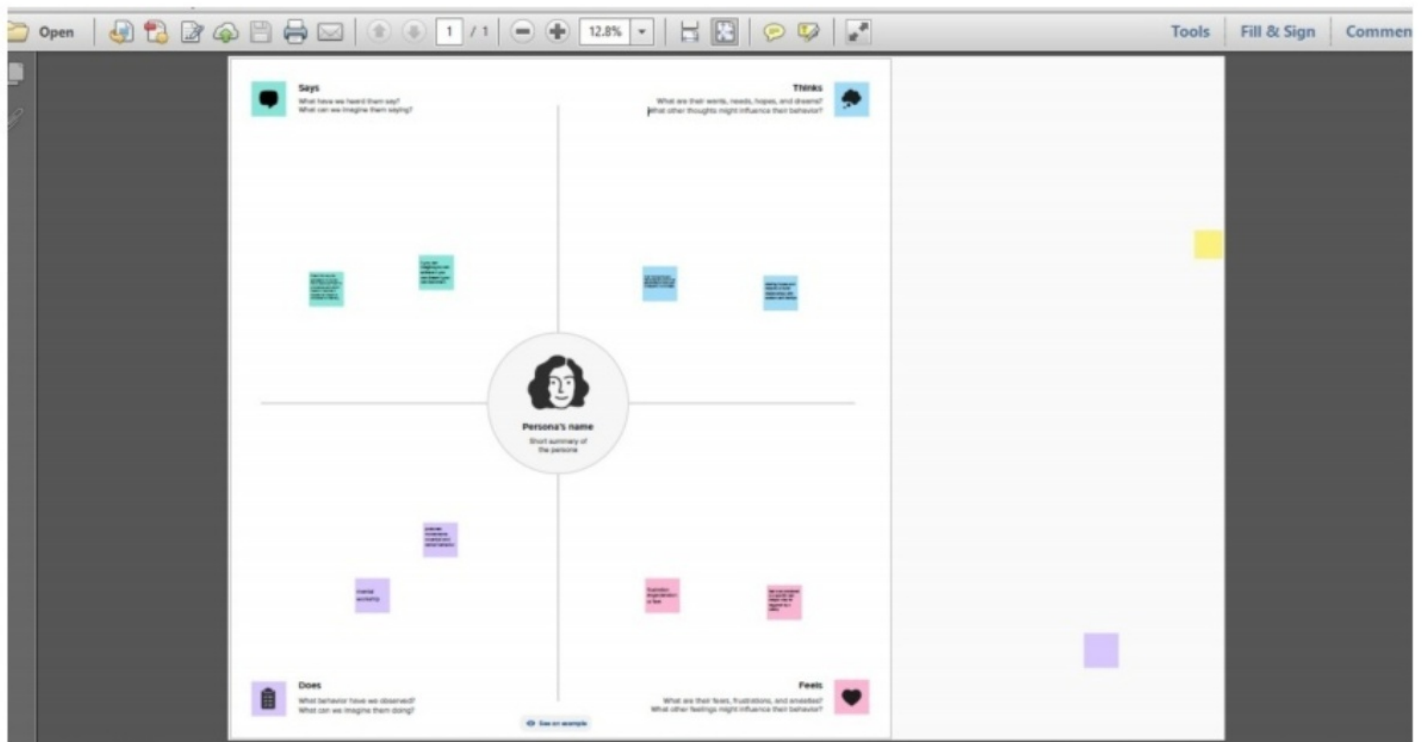
Data Exploration:

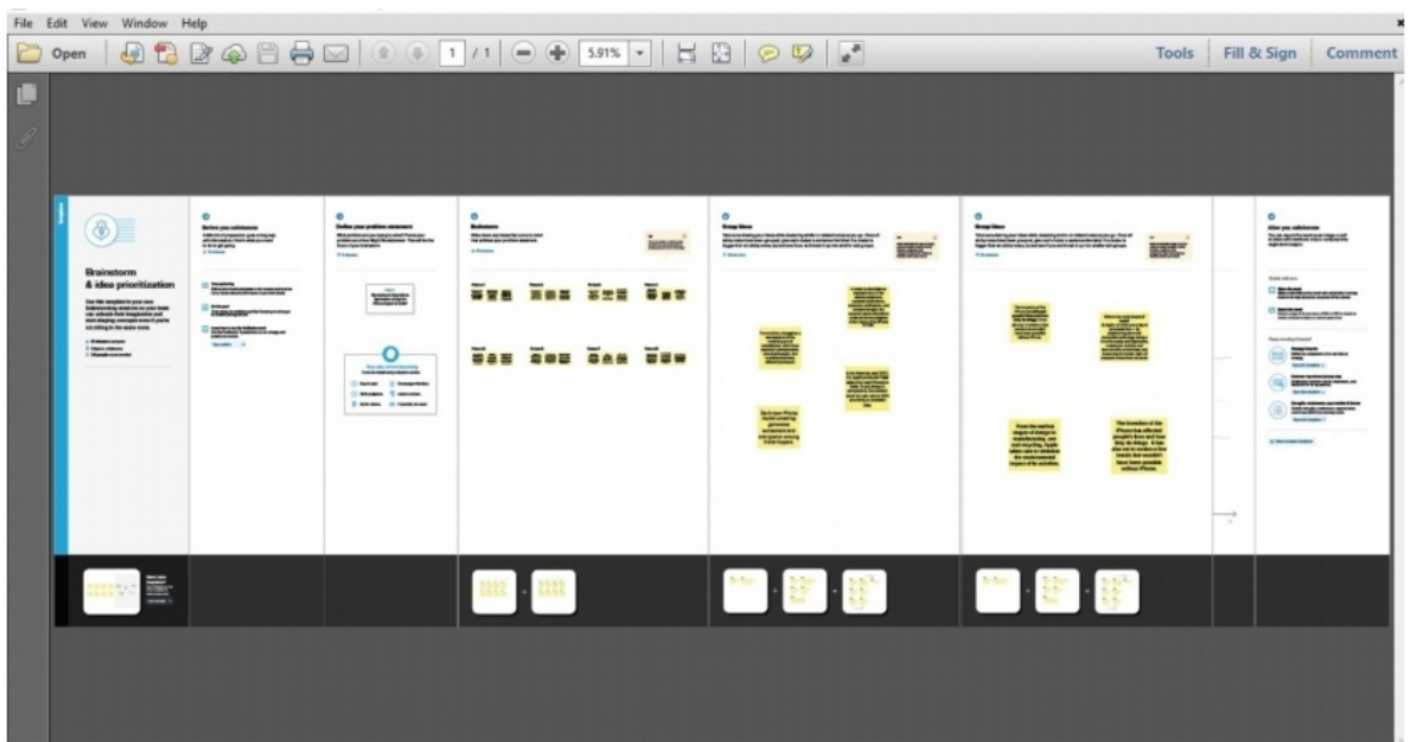
Tableau allows you to dive deep into aviation data, such as flight routes, passenger numbers, airports, and more. This enables you to explore patterns, trends, and anomalies in the air transportation network.

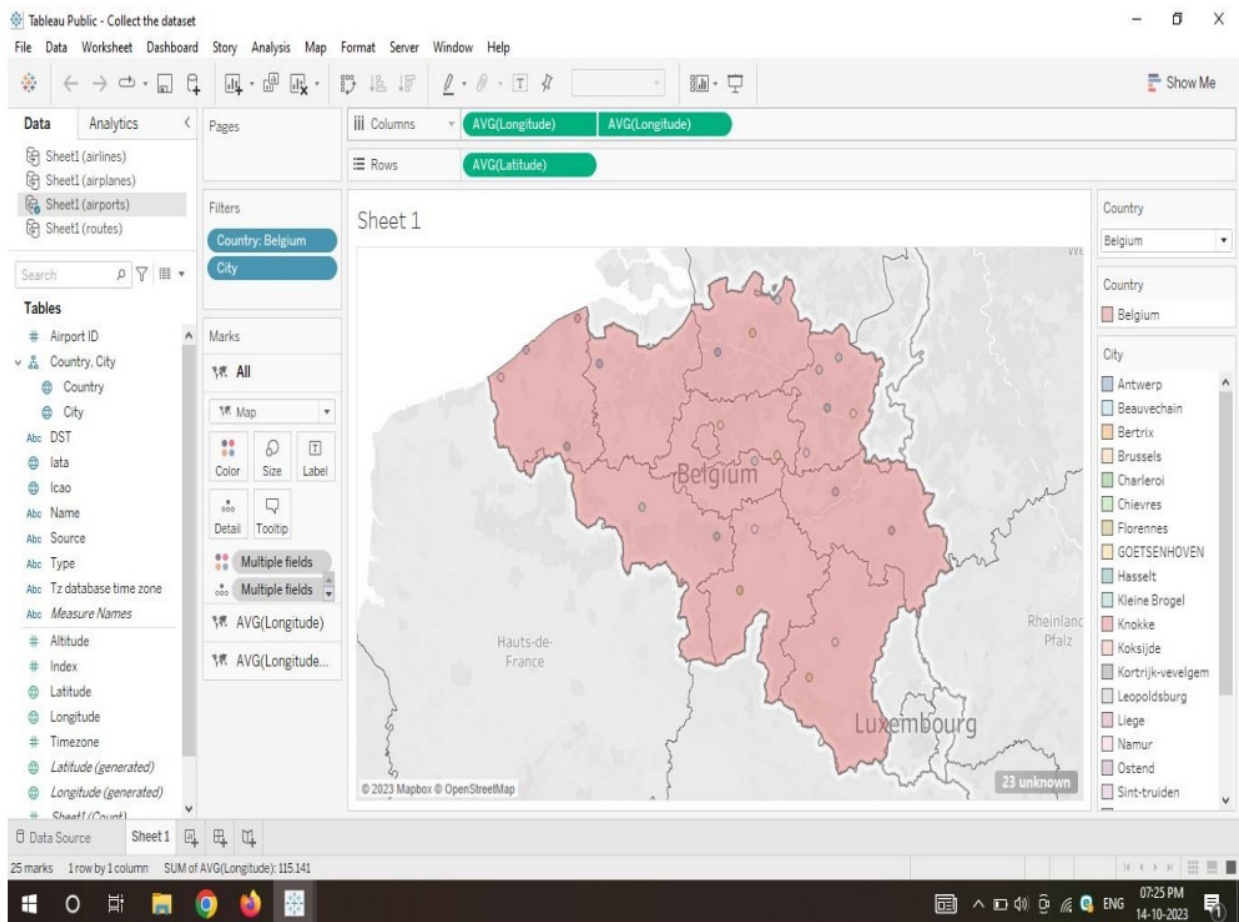
1.2 PURPOSE

Data Visualization:

One of the primary purposes is to leverage Tableau's data visualization capabilities to represent the extensive data associated with the air transportation network in an understandable and insightful manner. By creating interactive and visually appealing dashboards, we can make complex information accessible to a wide range of stakeholders, from industry professionals to policymakers and the general public.







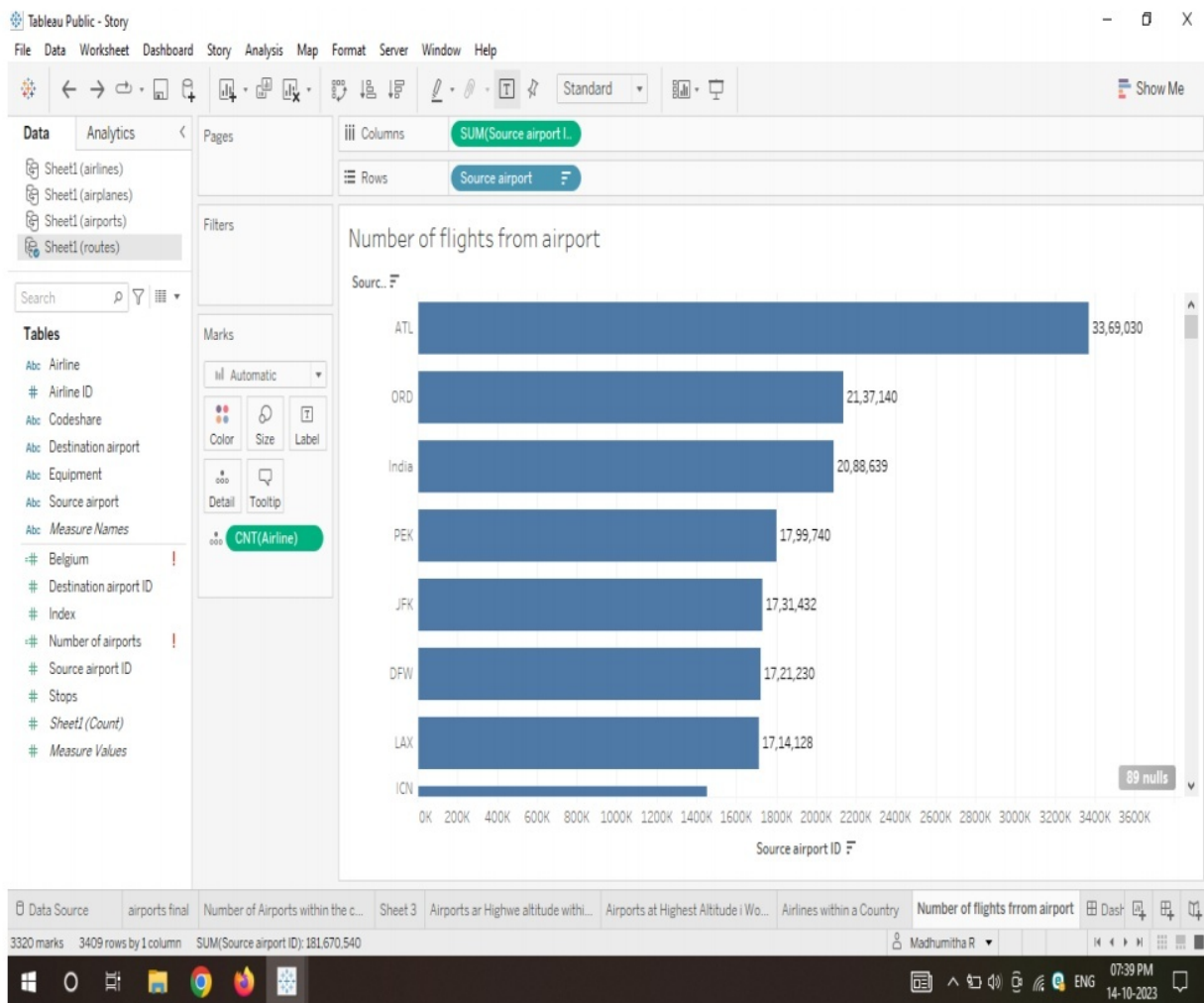


Tableau Public - Story

File Data Worksheet Dashboard Story Analysis Map Format Server Window Help

Fit Height Show Me

Data Analytics

Sheet1 (airlines)
Sheet1 (airplanes)
Sheet1 (airports)
Sheet1 (routes)

Search

Folders

- Active
- Airline ID
- Alias
- Callsign
- Country
- Iata
- Icao
- Name
- Measure Names
- Index
- index no.
- Latitude (generated)
- Longitude (generated)
- Sheet1 (Count)
- Measure Values

Filters

Country: Colombia
Active: Y

Marks

Automatic

Color Size Label

Detail Tooltip

Active

Airlines within a Country

Airline ID	Name	Icao	Callsign	Active
110	ACES Colombia	AES	ACES	<input checked="" type="checkbox"/>
1224	AeroRep	RPB	AEROREPUBLICA	<input checked="" type="checkbox"/>
4691	SATENA	NSE	SATENA	<input checked="" type="checkbox"/>
5020	TAMPA	TPA	TAMPA	<input checked="" type="checkbox"/>
11765	EasyFly	EFY	EASYFLY	<input checked="" type="checkbox"/>
16151	CCML Airlines	CCC	Null	<input checked="" type="checkbox"/>
16262	Fly Colombia (Interliging Flights)	3FF	Null	<input checked="" type="checkbox"/>
18946	VivaColombia	VVC	Null	<input checked="" type="checkbox"/>
19813	All Colombia	7KK	Null	<input checked="" type="checkbox"/>
20073	All America CO	7ZC	Null	<input checked="" type="checkbox"/>

Active

☐ (All)
☐ N
☒ Y

Country

Colombia

Active

☒ Y

Data Source airports final Number of Airports within the c... Sheet 3 Airports at Highwe altitude with... Airports at Highest Altitude i Wo... Airlines within a Country Number of flights from airport Dash

10 marks 10 rows by 1 column

Madhumitha R

07:39 PM 14-10-2023

Tableau Public - Story

File Data Worksheet Dashboard Story Analysis Map Format Server Window Help

Fit Height Show Me

Data Analytics

Sheet1 (airlines)
Sheet1 (airplanes)
Sheet1 (airports)
Sheet1 (routes)

Search

Tables

- Airport ID
- Country, City
 - Country
 - City
- DST
- Iata
- Icao
- Name
- Source
- Type
- Tz database time zone
- Measure Names
 - Altitude
 - Index
 - Latitude
 - Longitude
 - No of airports
 - Timezone
 - top n
 - top n1

Filters

Icao
Name

Marks

Automatic

Color Size Text

Detail Tooltip

SUM(Altitude)

Airports at Highest Altitude in World

Name	City	Icao	Altitude
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

Data Source airports final Number of Airports within the c... Sheet 3 Airports at Highwe altitude with... Airports at Highest Altitude i ... Airlines within a Country Number of flights from airport Dash

6 marks 6 rows by 1 column SUM(Altitude): 83,023

Madhumitha R

07:39 PM 14-10-2023

Tableau Public - Story

File Data Worksheet Dashboard Story Analysis Map Format Server Window Help

Standard

Show Me

Data Analytics

Sheet1 (airlines)
Sheet1 (airplanes)
Sheet1 (airports)
Sheet1 (routes)

Search

Tables

- Airport ID
- Country, City
- Country
- City
- DST
- Iata
- Icao
- Name
- Source
- Type
- Tz database time zone
- Measure Names
- Altitude
- Index
- Latitude
- Longitude
- No of airports
- Timezone
- top n
- top n 1

Filters

Country: Malaysia
City

Marks

Automatic

Color Size Text

Detail Tooltip

SUM(Altitude)

Airports at Higher altitude within a country

Index	Country	City	Icao	
4,848	Malaysia	Long Datih	WBGF	1,400
4,851	Malaysia	Bakalalan	WBGQ	2,900
4,853	Malaysia	Bario	WBGZ	3,350

Country

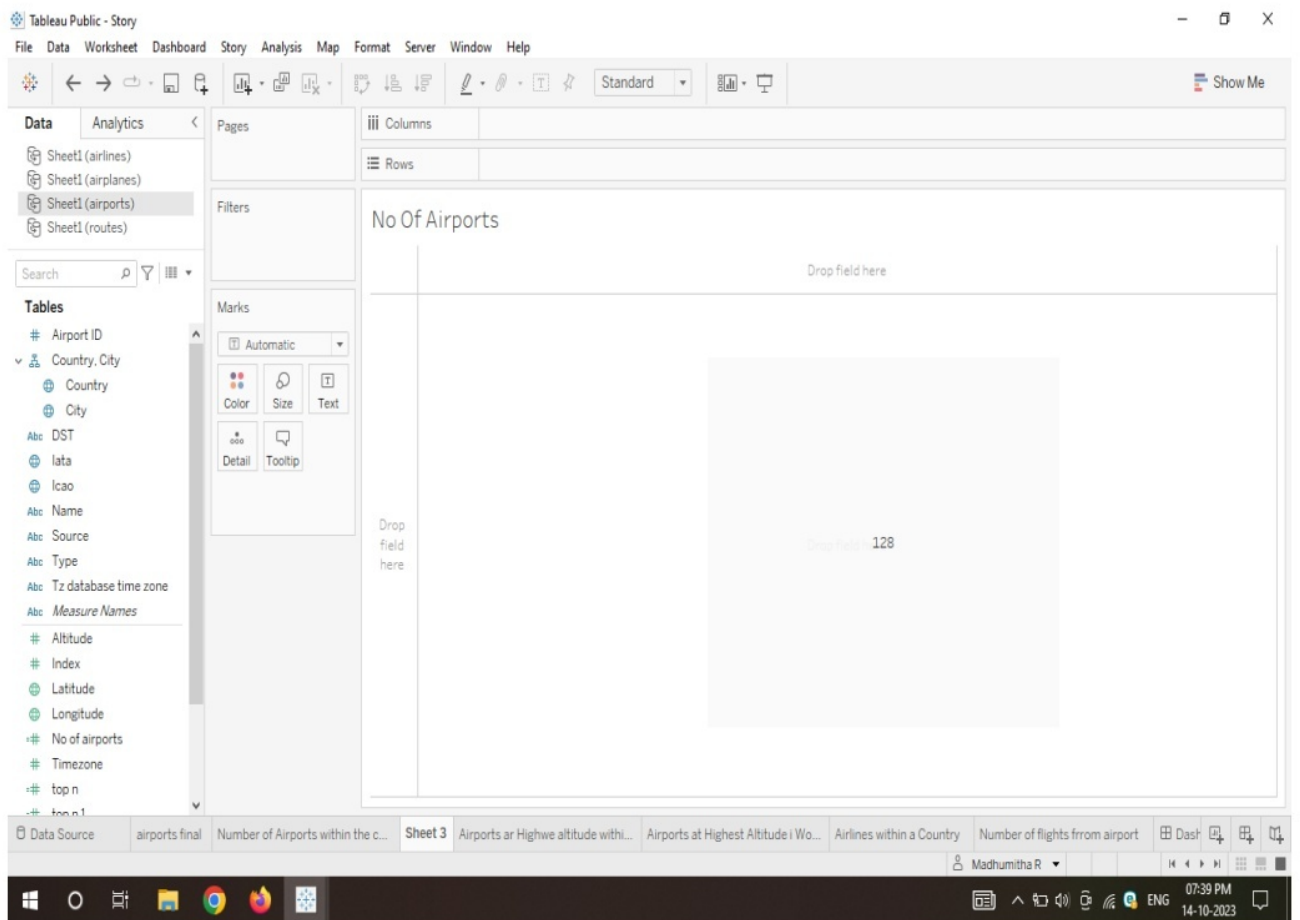
- (All)
- Afghanistan
- Albania
- Algeria
- American Samoa
- Angola
- Anguilla
- Antarctica
- Antigua and Bar...
- Argentina
- Armenia
- Aruba
- Australia
- Austria
- Azerbaijan
- Bahamas
- Bahrain
- Bangladesh
- Barbados
- Belarus
- Belgium
- Belize
- Benin
- Bermuda
- Bhutan
- Bolivia

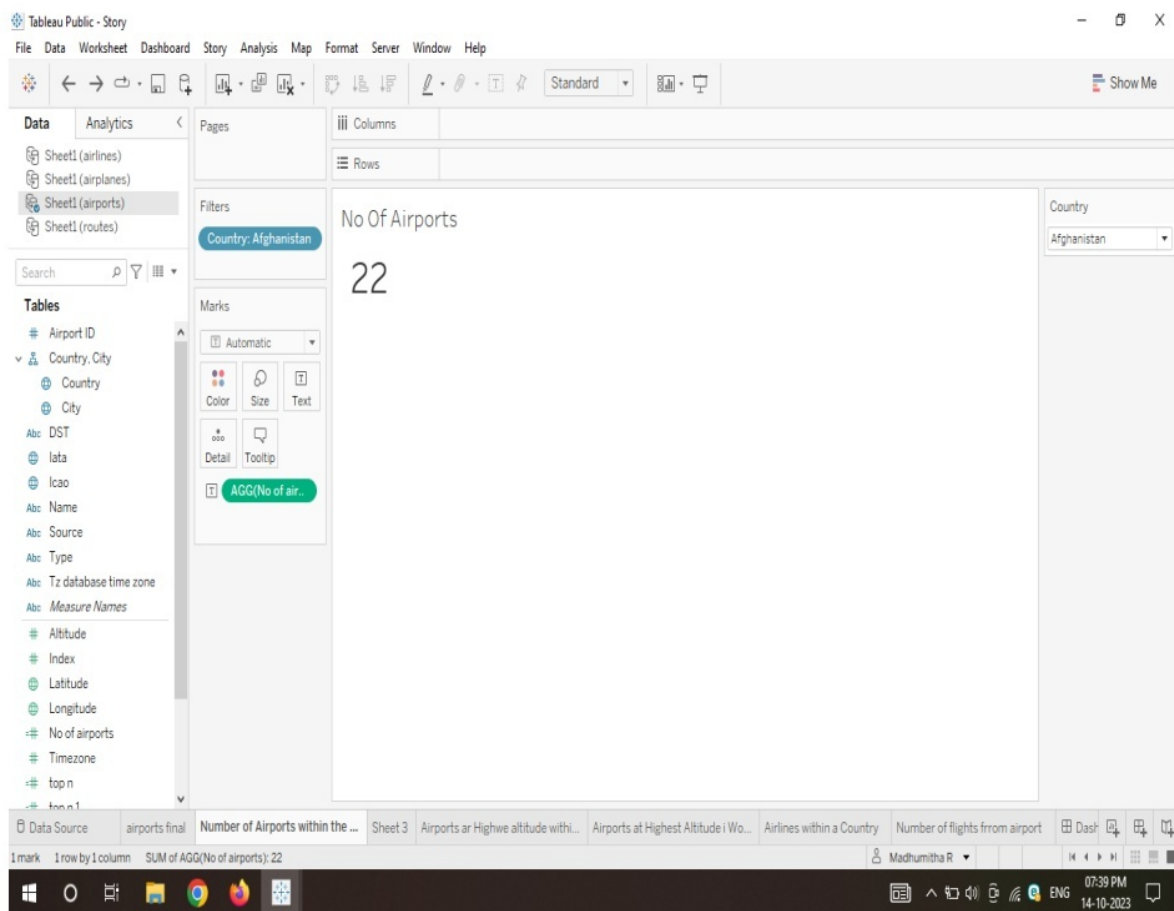
Data Source airports final Number of Airports within the c... Sheet 3 Airports at Highwe altitude wit... Airports at Highest Altitude i Wo... Airlines within a Country Number of flights from airport Dash

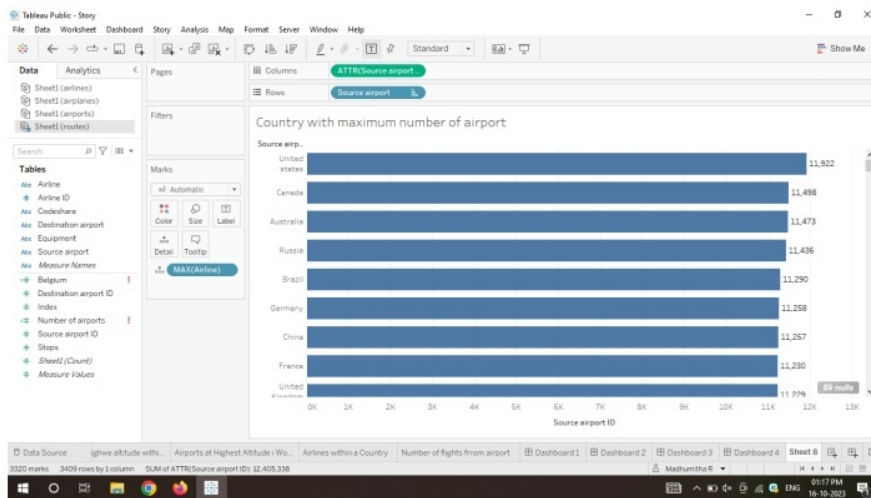
3 marks 3 rows by 1 column SUM(Altitude): 7,650

Madhumitha R

07:39 PM 14-10-2023







DASHBOARD:

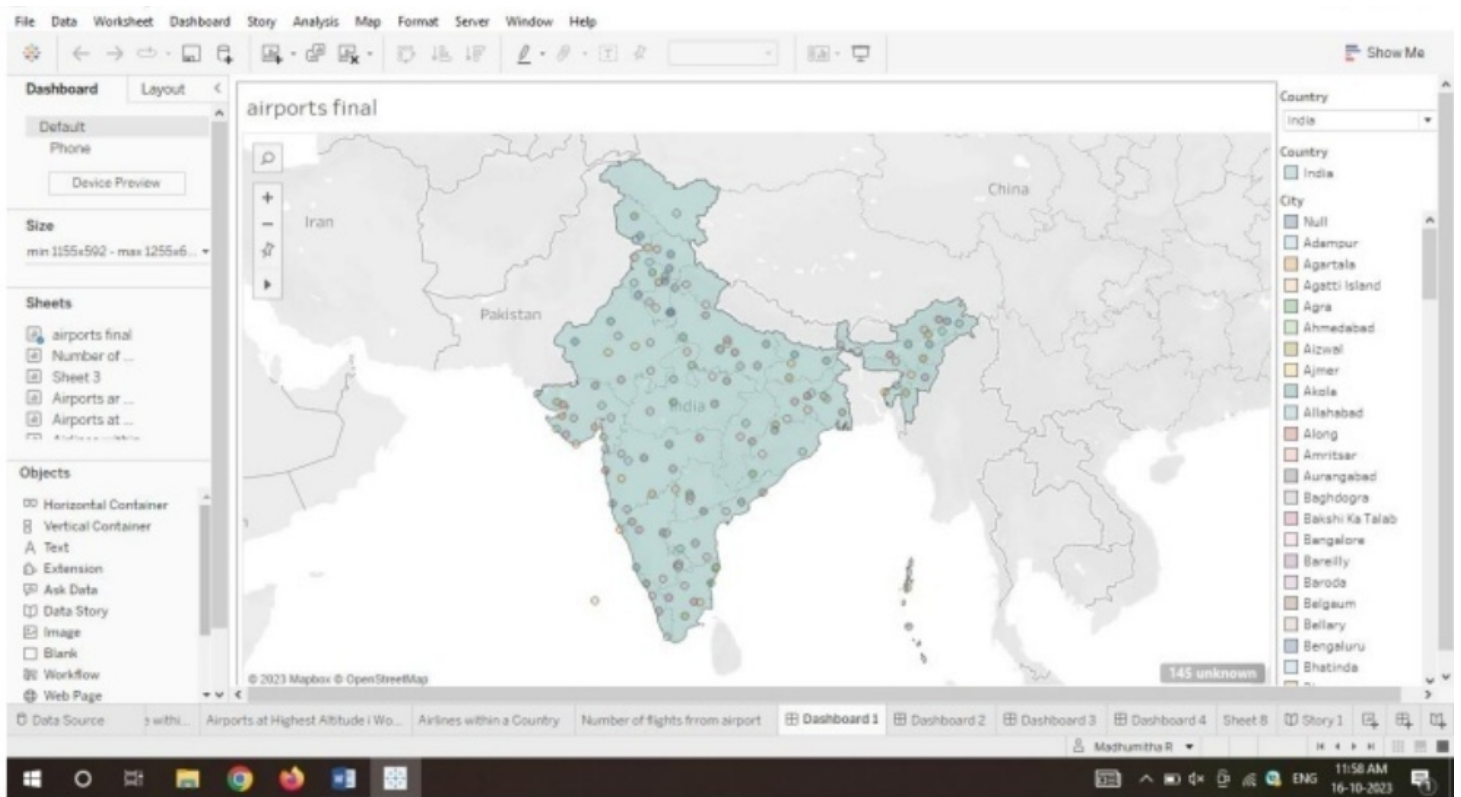


Tableau Public - Story

File Data Worksheet Dashboard Story Analysis Map Format Server Window Help

Dashboard Layout

Default
Phone
Device Preview

Size
min 1155x592 - max 1255x6...

Sheets

- airports final
- Number of ...
- Sheet 3
- Airports ar ...
- Airports at ...

Objects

- Horizontal Container
- Vertical Container
- Text
- Extension
- Ask Data
- Data Story
- Image
- Blank
- Workflow
- Web Page

Airports at Higher altitude within a country

Index	Country	City	Icao	
4,848	Malaysia	Long Datih	WBGF	1,400
4,851	Malaysia	Bakalalan	WBGQ	2,900
4,853	Malaysia	Bario	WBGZ	3,350

Airports at Highest Altitude in World

Name	City	Icao	
Daocheng			
Yading Airport	Daocheng	ZUDC	14,472
Qamdo Bangda Airport	Bangda	ZUBD	14,219
Kangding Airport	Kangding	ZUKD	14,042
Ngari Gunsa Airport	Shiquanhe	ZUAL	14,022
El Alto International Airport	La Paz	SLLP	13,355
Capitan Nicolas Rojas Airport	Potosi	SLPO	12,913

Data Source: Airports at Highest Altitude in Wo... Airlines within a Country Number of flights from airport Dashboard 1 Dashboard 2 Dashboard 3 Dashboard 4 Sheet 8 Story 1

Madhumitha R 11:58 AM 16-10-2023

Tableau Public - Story

File Data Worksheet Dashboard Story Analysis Map Format Server Window Help

Dashboard Layout

Default
Phone
Device Preview

Size
Automatic











Sheets

- airports final
- Number of ...
- Sheet 3
- Airports ar ...
- Airports at ...

Objects

- Horizontal Container
- Vertical Container
- Text
- Extension
- Ask Data
- Data Story
- Image
- Blank
- Workflow
- Web Page

Airlines within a Country

Airline ID	Name	ICAO	Callsign	
110	ACES Colombia	AES	ACES	
1224	AeroRep	RPB	AEROREPUBLICA	
4691	SATENA	NSE	SATENA	
5020	TAMPA	TPA	TAMPA	
11765	EasyFly	EFY	EASYFLY	
16151	CCML Airlines	CCC	Null	
16262	Fly Colombia (Interliging Flights)	3FF	Null	
18946	VivaColombia	VVC	Null	
19813	All Colombia	7KK	Null	
20073	All America CO	7ZC	Null	


Active

☐ (All)
☐ N
☒ Y

Country

Colombia

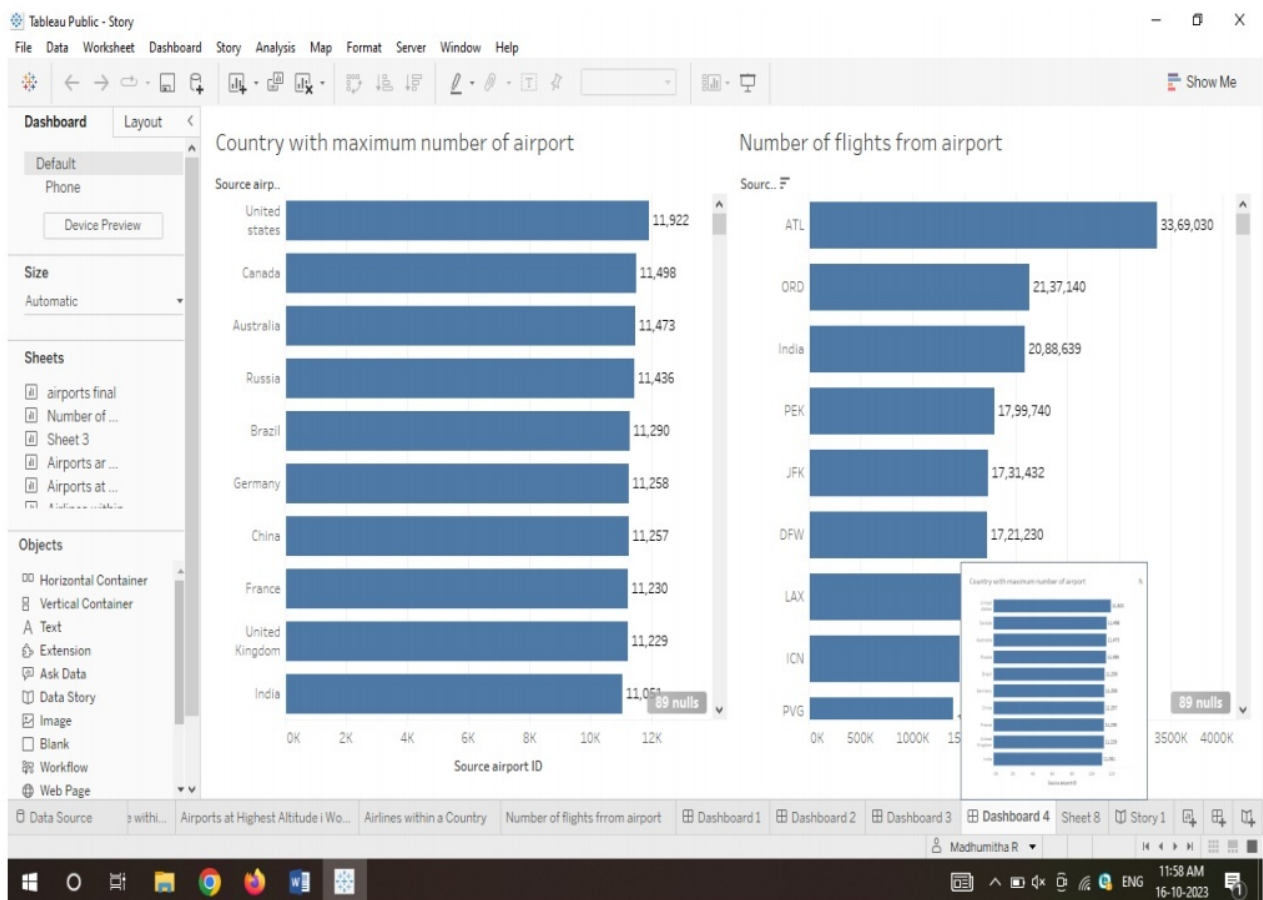
Active

 Y

Data Source | with... | Airports at Highest Altitude | Wo... | Airlines within a Country | Number of flights from airport | Dashboard 1 | **Dashboard 2** | Dashboard 3 | Dashboard 4 | Sheet 8 | Story 1

Madhumitha R

11:58 AM
16-10-2023



STORY:

Menu

Story 1.pdf

+ Create

Sign in

All tools

Edit

Convert

Sign

Find text or tools

Export a PDF

Edit a PDF

Create a PDF

Combine files

Organize pages

Add comments

Request e-signatures

Scan & OCR

Protect a PDF

Redact a PDF

Compress a PDF

Prepare a form

Convert, edit and e-sign PDF forms & agreements.

Free 7-day trial

Story 1

World Map showing countries with details...

Table showing airports which are at highest...

Table showing list of all airlines within the...

Bar graphs showing countries with max n...

Airline IATA	Airline Name	ICAO	Country	Active
110	ACES Colombia	AES	ACES	<input checked="" type="checkbox"/>
1224	AeroRep	RPB	AEROREPUBLICA	<input type="checkbox"/>
4691	SATENA	NSE	SATENA	<input type="checkbox"/>
5020	TAMPA	TPA	TAMPA	<input type="checkbox"/>
11765	EasyFly	EFY	EASYFLY	<input type="checkbox"/>
16151	CCML Airlines	CCC	Null	<input type="checkbox"/>
16262	Fly Colombia (Interliging Flights)	3FF	Null	<input type="checkbox"/>
18946	VivaColombia	VVC	Null	<input type="checkbox"/>

Active

☐ N

☒ Y

Country

Colombia

Active

☐ N

☒ Y

Menu

Story 1.pdf

+ Create

Sign in

All tools

Edit

Convert

Sign

Find text or tools

All tools

Export a PDF

Edit a PDF

Create a PDF

Combine files

Organize pages

Add comments

Request e-signatures

Scan & OCR

Protect a PDF

Redact a PDF

Compress a PDF

Prepare a form

Convert, edit and e-sign PDF forms & agreements.

Free 7-day trial

Story 1

World Map showing countries with details...

Table showing airports which are at highest...

Table showing list of all airlines within the...

Bar graphs showing countries with max n...

Airports at Higher altitude within a country

Index	Country	City	Icao	
4,848	Malaysia	Long Datih	WBGF	1,400
4,851	Malaysia	Bakalaian	WBGQ	2,900
4,853	Malaysia	Bario	WBGZ	3,350

Airports at Highest Altitude in World

Name	City	Icao	
Daochang Yading Airport	Daocheng	ZUDC	14,472
Qamdo Bangda Airport	Bangda	ZUBD	14,219
Kangding Airport	Kangding	ZUKD	14,042
Nigari Gunsai Airport	Shiquanhe	ZUAL	14,022
El Alto International Airport	La Paz	SLLP	13,355
Capitan Nicolas Rojas Airpo...	Potosi	SLPO	12,913

12:04 PM

16-10-2023

Menu

Story 1.pdf

Create

Sign in

All tools

Edit

Convert

Sign

Find text or tools

All tools

Export a PDF

Edit a PDF

Create a PDF

Combine files

Organize pages

Add comments

Request e-signatures

Scan & OCR

Protect a PDF

Redact a PDF

Compress a PDF

Prepare a form

Convert, edit and e-sign PDF forms & agreements.

Free 7-day trial

Story 1

World Map showing countries with details...

Table showing airports which are at highest...

Table showing list of all airlines within the...

Bar graphs showing countries with max n...

Country

India

City

Null

Agartala

Agatti Island

Agra

Ahmedabad

Aizawl

Ajmer

Akola

Allahabad

Along

Amritsar

Aurangabad

Bagdogra

Bakshi Ka Talab

Bangalore

Bareilly

Baroda

Belgaum

Bellary

Bengaluru

Bhatinda

Bhaunagar

Bhiwani

Bhopal

Bhubaneswar

Bhub

18

Menu

Story1.pdf

+ Create

Sign in

All tools

Edit

Convert

Sign

Find text or tools

All tools

Export a PDF

Edit a PDF

Create a PDF

Combine files

Organize pages

Add comments

Request e-signatures

Scan & OCR

Protect a PDF

Redact a PDF

Compress a PDF

Prepare a form

Convert, edit and e-sign PDF forms & agreements.

Free 7-day trial

Story 1

World Map showing countries with details...

Table showing airports which are at highest...

Table showing list of all airlines within the...

Bar graphs showing countries with max n...

Country with maximum number of airport

Number of flights from airport

Source airp...

United states	11,922
Canada	11,498
Australia	11,473
Russia	11,436
Brazil	11,290
Germany	11,258
China	11,257
France	11,230
United Kingdom	11,229
India	11,051
Indonesia	10,941
Japan	10,940
South Africa	10,792

Source airp...

ATL	3,369,030
ORD	2,137,140
India	2,088,639
PEK	1,799,740
JFK	1,731,432
DFW	1,721,230
LAX	1,714,128
ICN	1,454,100
PVG	1,399,866
DEN	1,354,111
SIN	1,352,928

12:05 PM

16-10-2023

4. ADVANTAGE AND DISADVANTAGE

ADVANTAGE: -

Real-time Analytics:

Tableau can be set up to provide real-time analytics, which is crucial in monitoring the dynamic air transportation network. This enables airlines, airports, and aviation authorities to make quick decisions based on the most recent data.

Geospatial Analysis:

Tableau's mapping capabilities make it ideal for geospatial analysis of flight routes, airport locations, and regional traffic patterns. It can reveal insights into connectivity, congestion, and travel demand.

DISADVANTAGE: -

COST:

Tableau licenses can be expensive, which may pose a barrier to smaller organizations or individuals interested in using it for analysis.

Learning Curve:

Tableau has a learning curve, especially for users new to data visualization and analysis tools. It may take time to become proficient in creating effective visualizations.

5.APPLICATIONS: -

Flight Route Analysis:

Tableau can be used to visualize flight routes, their frequency, and passenger demand. This analysis can help airlines identify profitable routes and make informed decisions about route expansion or reduction

Airport Performance :

Analyze airport data, including passenger traffic, delays, and on-time performance. This can aid airport authorities in optimizing operations, improving passenger experience, and reducing congestion.

6.CONCLUSION:

In conclusion, Tableau empowers us to dive deep into the global air transportation network, revealing patterns, trends, and anomalies that might otherwise remain hidden. From optimizing flight routes to improving airport operations and enhancing passenger experiences, Tableau's capabilities are invaluable for stakeholders in the aviation industry. By harnessing the power of data and visualization, we can make informed decisions that not only benefit the industry but also contribute to a safer, more efficient, and environmentally sustainable global air transportation network.

7. FUTURE SCOPE:

Predictive Analytics:

Use historical data to predict future trends, enabling airlines to plan better.

Environmental Impact Analysis:

Analyze emissions data to support sustainability efforts.