

Power BI Project Data Card – Airline Passenger & Flight Analysis

1. Project Title - Airline Passenger and Flight Data Analysis using Power BI

2. Problem Statement

Analyze passenger demographic data, travel patterns, and airport distribution from airline data to provide actionable insights for:

- Improving customer segmentation
- Enhancing airport-level planning
- Identifying passenger trends by country, gender, and age group

3. Dataset Description

File Used: Airline Dataset Updated - v2.csv

Columns:

- Passenger ID: Unique identifier
- First Name, Last Name
- Age, Gender, Nationality
- Airport Name, Arrival Airport
- Airport Country Code, Airport Continent, Country Name
- Continent



240

Distinct Nationalities

99K

Total Passengers

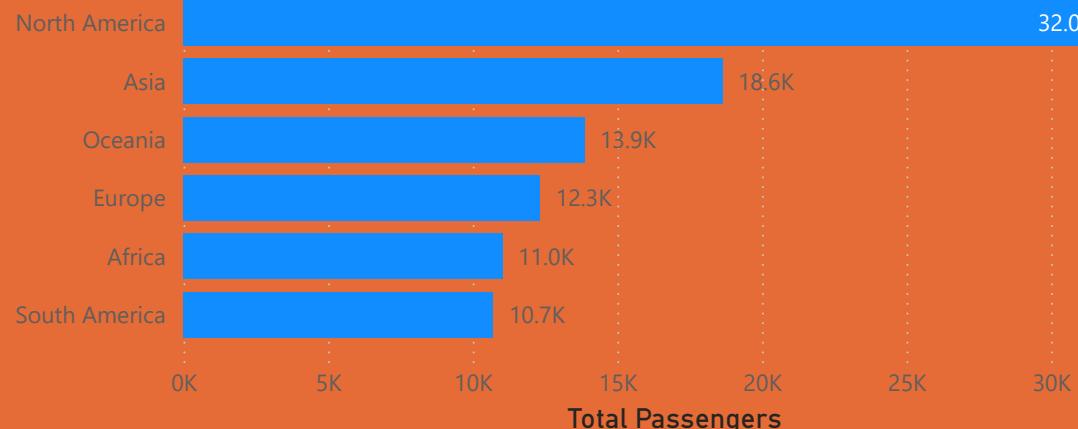
9061

Distinct Airports

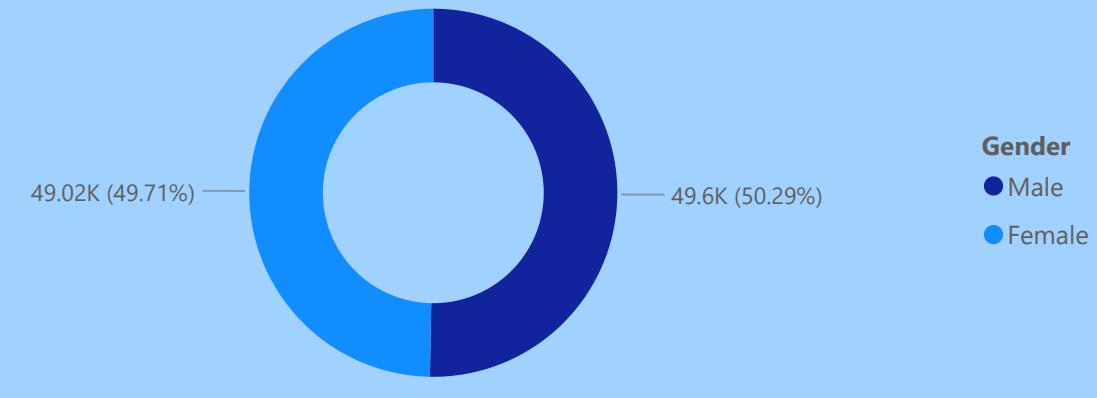
235

Distinct Countries

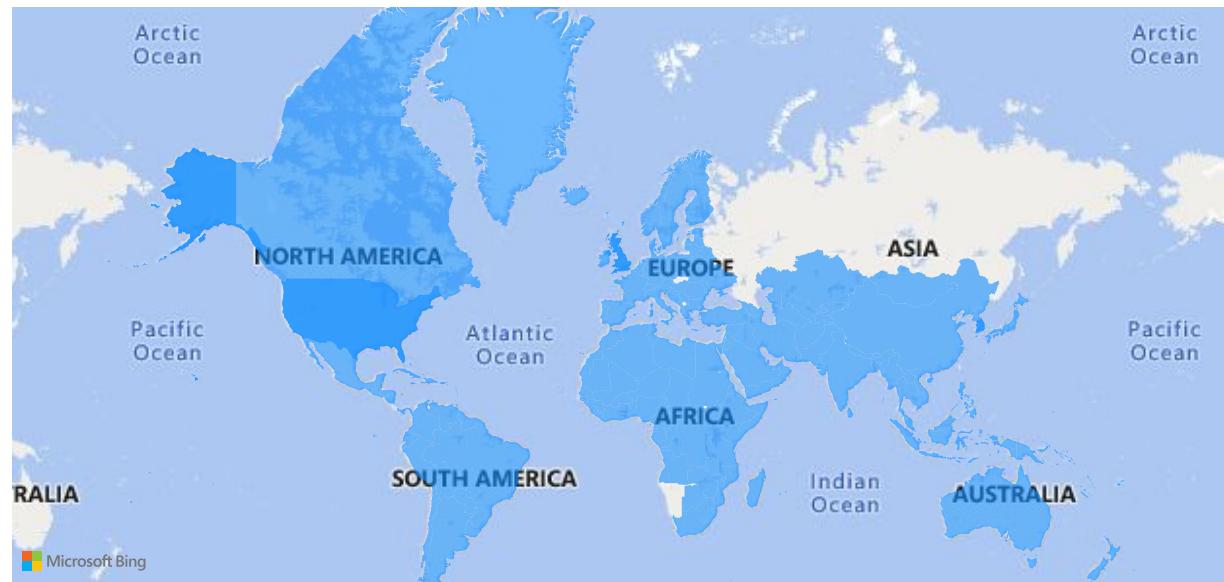
Total Passengers by Continents



Count of Gender by Gender



Total Passengers by Airport Country Code



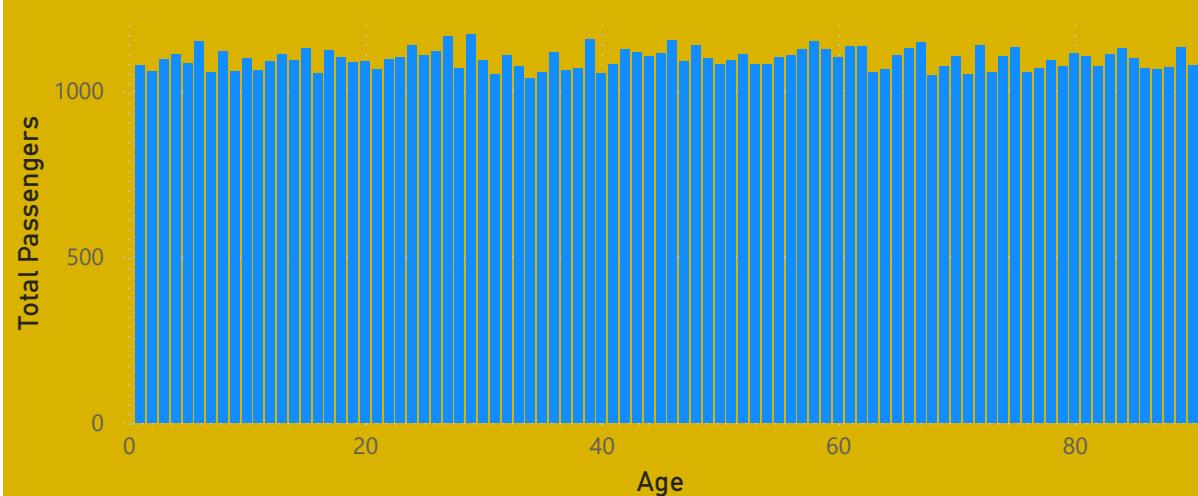
Departure Date

1/1/2022 12/30/2022

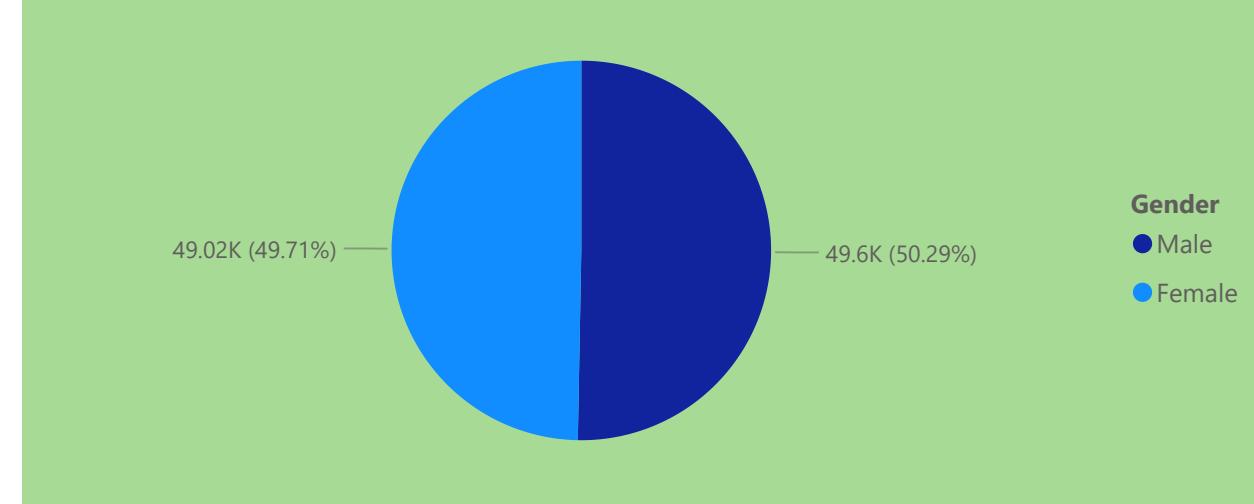
Overview Dashboard

- 1 **Name:** Overview
- 2 **Purpose:** High-level summary of total figures and global view
- 3 **Visuals:**
 - KPI Cards: Total Passengers, Countries, Airports, Nationalities
 - Map: Passenger count by Country or Airport
 - Donut Chart: Gender distribution
 - Bar Chart: Passengers by Continent
 - Date Slicer: Departure Date

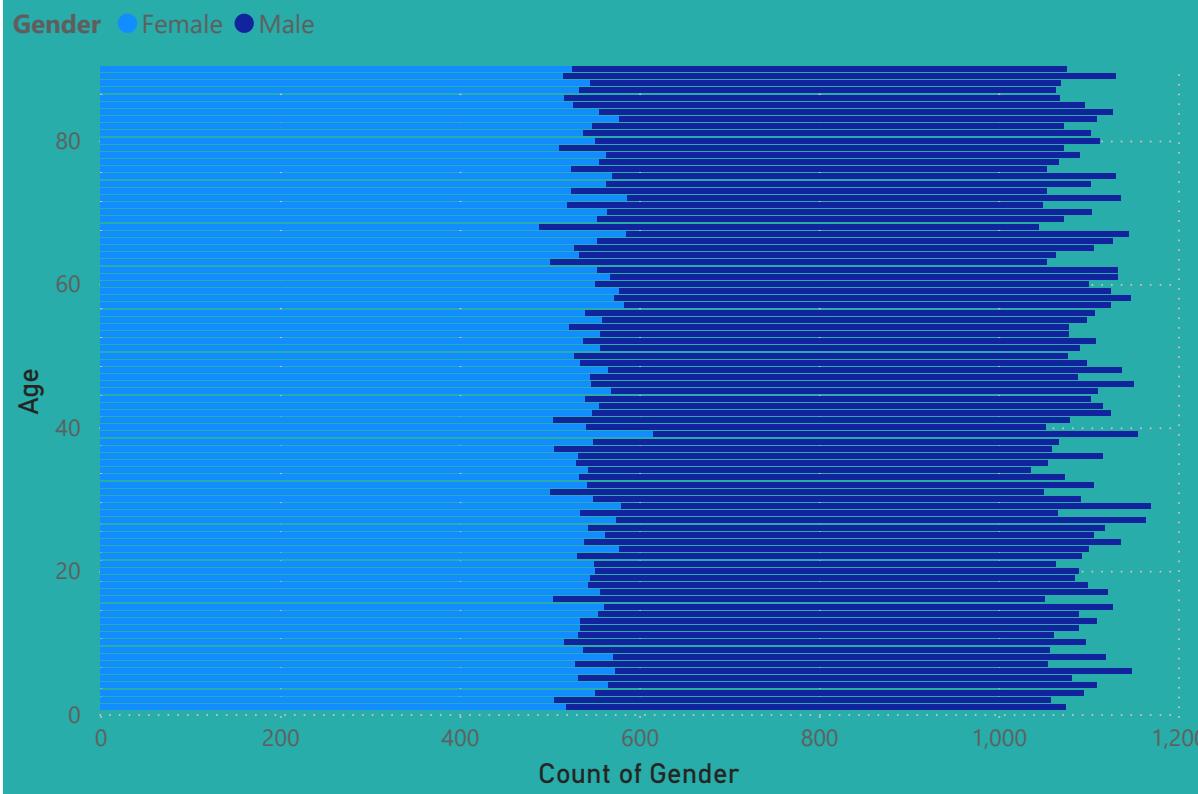
Total Passengers by Age



Count of Gender by Gender



Count of Gender by Age and Gender



Gender, Age, Nationality

- ▽ Female
- ▽ Male

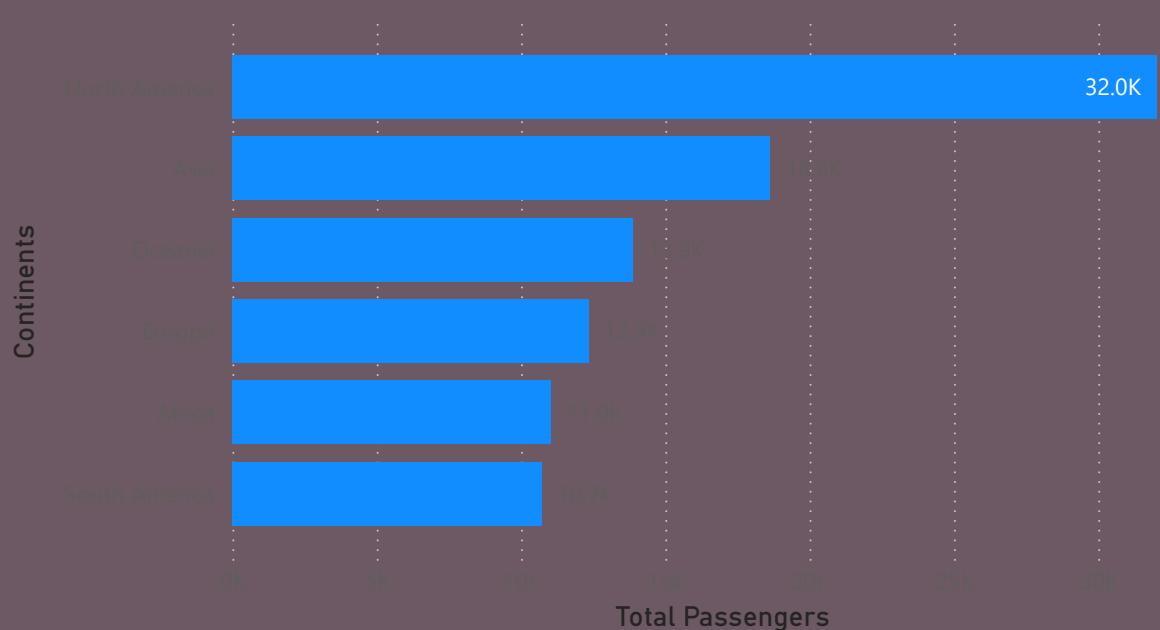
Passenger Demographics

1. **Name:** Demographics
2. **Purpose:** Analyze age and gender distribution
3. **Visuals:**
 - Bar/Column Chart: Passengers by Age Group
 - Pie Chart: Gender distribution
 - Stacked Bar: Age by Gender
 - Slicers: Gender, Age Group, Nationality

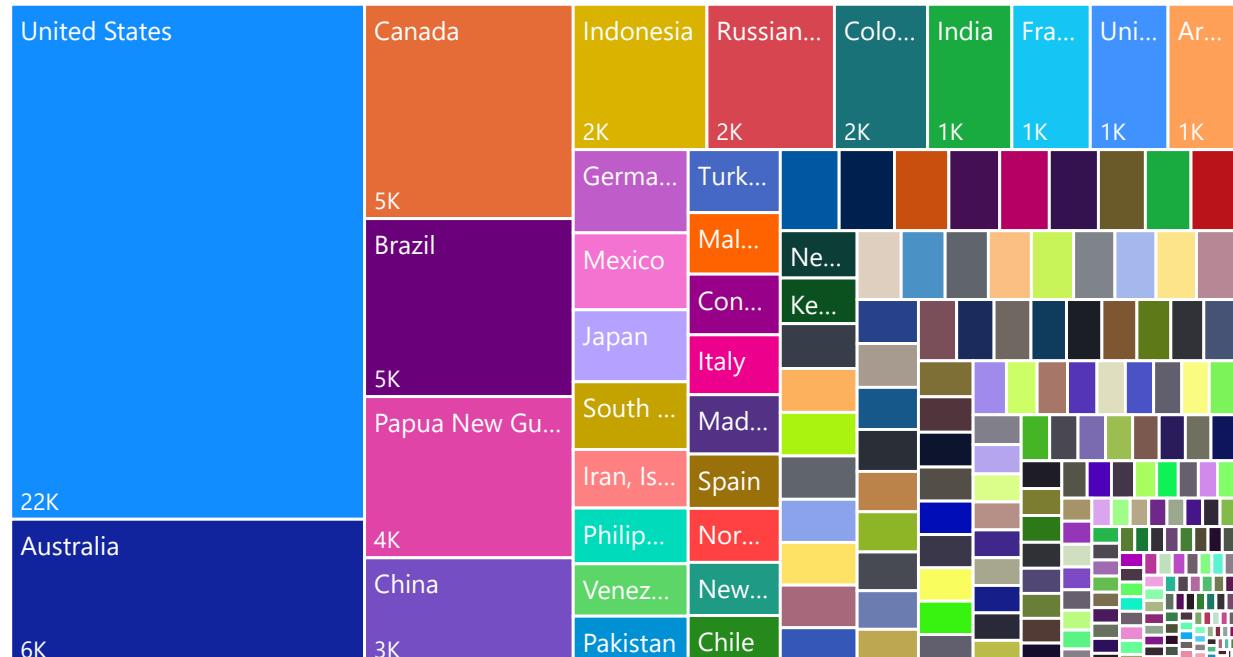
Total Passengers by Airport Name



Total Passengers by Continents



Total Passengers by Country Name



Country Name

Total Passengers

Zimbabwe	148
Zambia	222
Yemen	186
Western Sahara	39
Wallis and Futuna	17
Virgin Islands, U.S.	52
Virgin Islands, British	31
Viet Nam	368
Venezuela, Bolivarian Republic of	730
Vanuatu	327
Uzbekistan	128
Uruguay	163
United States Minor Outlying Islands	27
United States	22104
United Kingdom	1371
United Arab Emirates	158
Total	98619

Geographic Distribution

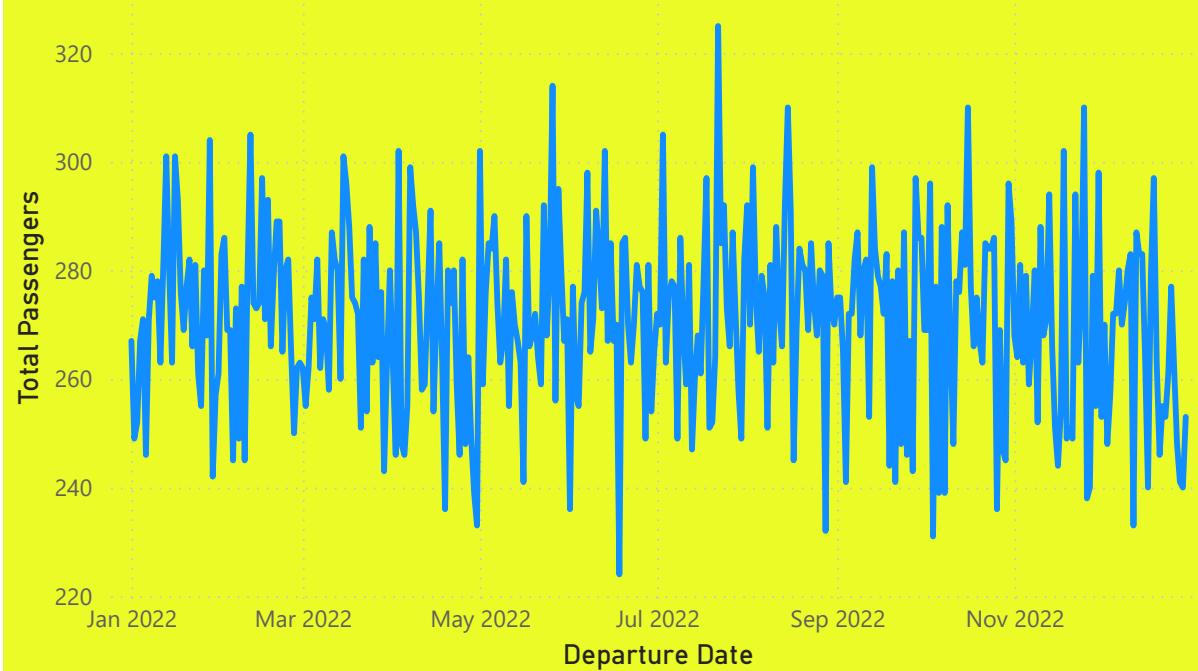
1 Name: Geographic View

2 Purpose: Visualize passenger movement by country and region

3 Visuals:

- Map: Passengers by Airport Name
- Tree Map: Passengers by Country
- Bar Chart: Passengers by Continent
- Table: Country vs. Count of Passengers

Total Passengers by Departure Date

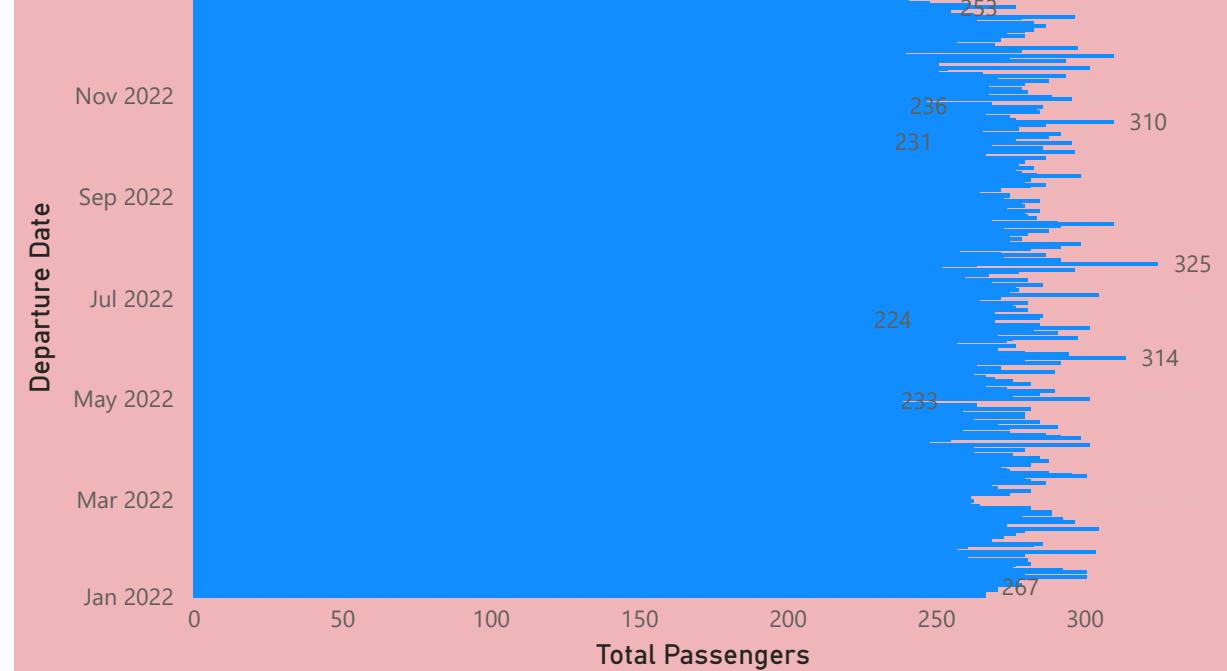


Departure Year, Departure Month

^ 2022

- April
- August
- December
- February
- January
- July
- June
- March
- May
- November

Total Passengers by Departure Date



▼

Time-Based Analysis

1 **Name:** Time Analysis

2 **Purpose:** Identify passenger trends over time

3 **Visuals:**

- Line Chart: Passengers over time (Departure Date)
- Bar Chart: Monthly Passenger Trends (Departure Month)
- Slicers: Year, Month

Quick measure

Gender	Age	Country Name	Nationality	Departure Date
Female	4	Zimbabwe	Portugal	Thursday, March 31, 2022
Female	4	Zimbabwe	Russia	Saturday, April 30, 2022
Female	6	Zimbabwe	Ukraine	Friday, December 23, 2022
Female	9	Zimbabwe	Indonesia	Monday, June 20, 2022
Female	11	Zimbabwe	United States	Sunday, August 21, 2022
Female	12	Zimbabwe	China	Wednesday, March 16, 2022
Female	13	Zimbabwe	France	Sunday, January 16, 2022
Female	14	Zimbabwe	Indonesia	Saturday, October 15, 2022
Female	15	Zimbabwe	Canada	Friday, December 23, 2022
Female	15	Zimbabwe	Poland	Sunday, February 06, 2022
Female	15	Zimbabwe	Portugal	Friday, August 12, 2022
Female	16	Zimbabwe	Philippines	Monday, May 09, 2022
Female	19	Zimbabwe	China	Monday, August 01, 2022
Female	19	Zimbabwe	Netherlands	Friday, August 26, 2022
Female	19	Zimbabwe	Tanzania	Thursday, July 28, 2022
Female	22	Zimbabwe	China	Monday, January 03, 2022
Female	22	Zimbabwe	France	Saturday, January 01, 2022
Female	24	Zimbabwe	Netherlands	Thursday, October 27, 2022
Female	24	Zimbabwe	Sweden	Monday, August 22, 2022
Female	25	Zimbabwe	Indonesia	Saturday, February 05, 2022
Female	26	Zimbabwe	Ethiopia	Sunday, November 20, 2022
Female	27	Zimbabwe	Brazil	Thursday, October 20, 2022
Female	29	Zimbabwe	China	Thursday, August 18, 2022
Female	29	Zimbabwe	Indonesia	Friday, August 19, 2022
Female	29	Zimbabwe	Sweden	Wednesday, March 09, 2022
Female	32	Zimbabwe	Paraguay	Friday, December 02, 2022
Female	34	Zimbabwe	Russia	Friday, February 11, 2022
Female	35	Zimbabwe	Thailand	Friday, June 17, 2022
Female	36	Zimbabwe	China	Tuesday, June 14, 2022
Female	37	Zimbabwe	China	Thursday, December 01, 2022
Female	37	Zimbabwe	Indonesia	Sunday, May 01, 2022
Female	41	Zimbabwe	Portugal	Thursday, December 22, 2022
Female	42	Zimbabwe	Poland	Sunday, June 05, 2022
Female	42	Zimbabwe	Mauritius	Monday, August 08, 2022

Country Name
Afghanistan
Albania
Algeria
American Samoa
Andorra
Angola
Anguilla
Antigua and Barbuda
Argentina
Armenia
Aruba
Australia
Austria

Passenger Details Table

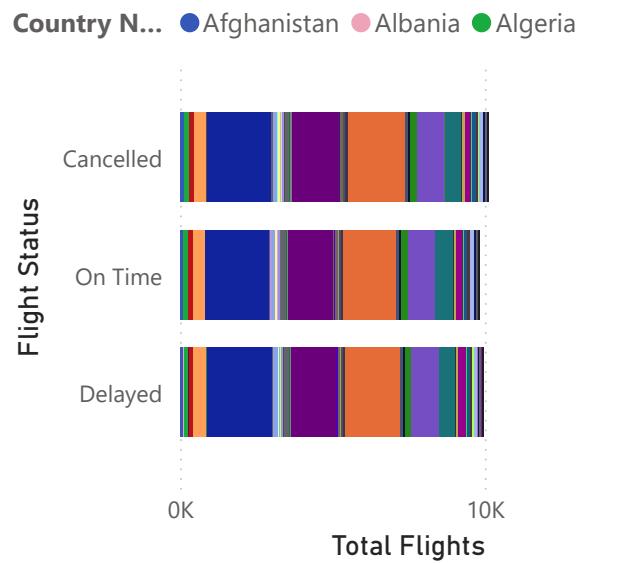
1 **Name:** Passenger Table

2 **Purpose:** Detailed passenger-level view

3 **Visuals:**

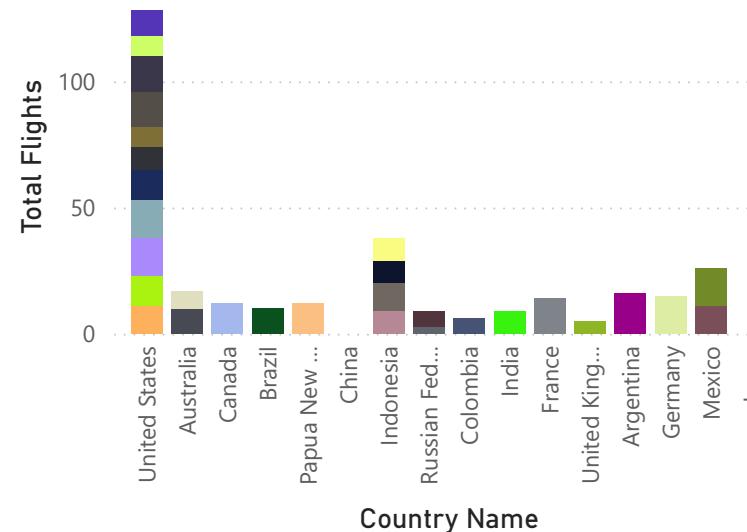
- Table Visual: Age, Gender, Country, Nationality, Departure Date
- Searchable slicers for easy filtering

Total Flights by Flight Status and Country Name

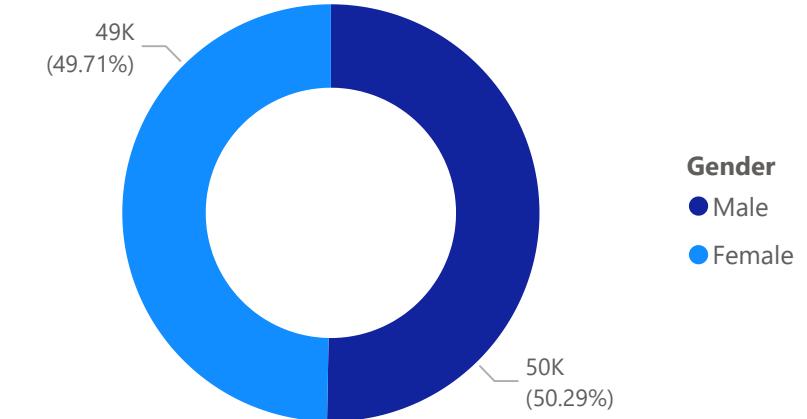


Total Flights by Country Name and Airport Name

Airport Name ● 28 de Nov... ● 9 de Maio ... ● A Coruña ...

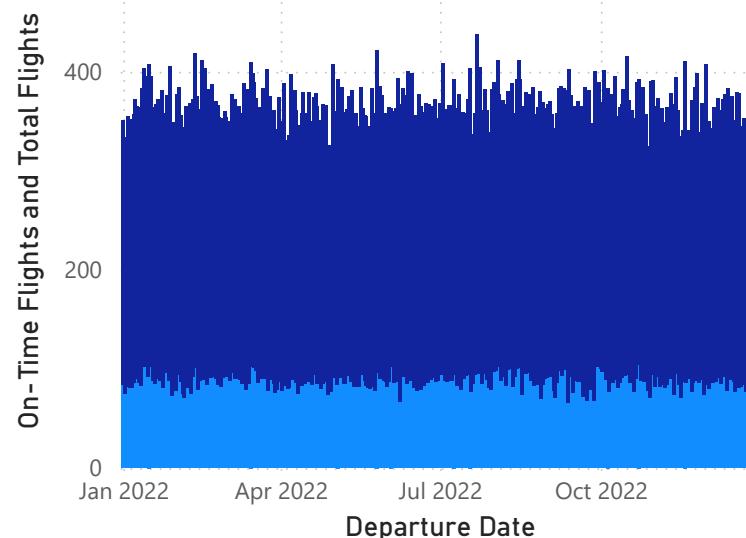


Total Passengers by Gender

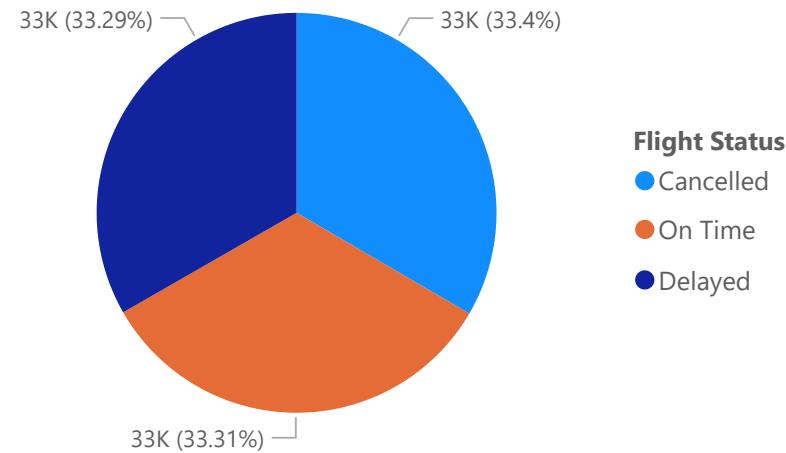


On-Time Flights and Total Flights by Departure Date

● On-Time Flights ● Total Flights



Total Flights by Flight Status



Drillthrough View

- Name:** Country Drillthrough / Demographic Details
- Purpose:** Allow drillthrough to focus on specific categories
- Visuals:**
 - Detailed charts filtered by Country, Age, or Gender
 - Profile Summary: Specific subgroup breakdowns
 - KPIs and visuals update based on selected category

Outcome & Insights

- Identify **top contributing countries and airports**
- Understand **demographic trends** (e.g., age/gender patterns)
- Spot **monthly travel peaks** for planning
- Enable drilldown into **country-specific passenger segments**

Potential Use Cases

- Airport operations optimization
- Targeted marketing by nationality/age/gender
- Seasonal demand forecasting
- Passenger profiling for loyalty programs