

adityaatade@gmail.com

HIGH CLOUD AIRLINES

Airline Operations Analytics
Excel | Power BI | Tableau | SQL

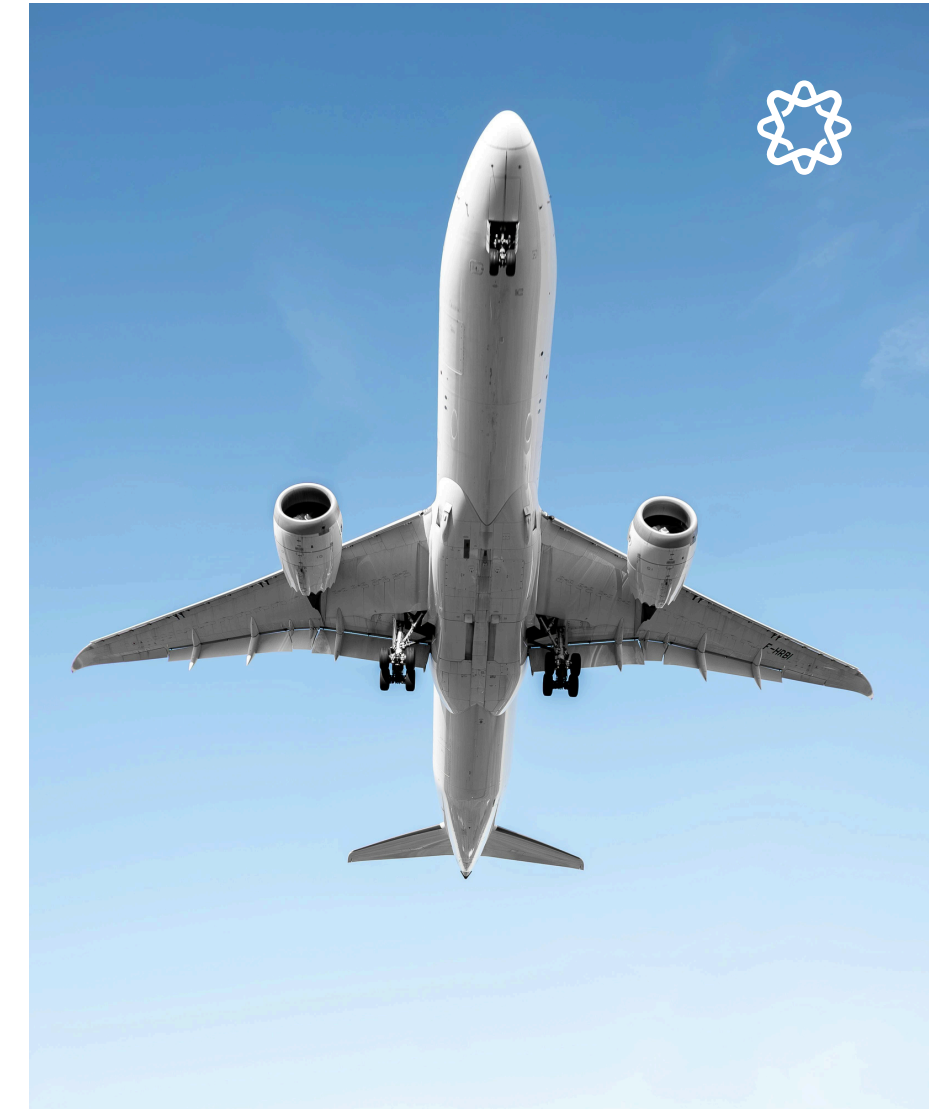
PROBLEM STATEMENT

Airline leaders struggled to clearly see:

- *Load Factor performance*
- *Passenger demand patterns*
- *Route & regional efficiency*

📌 *Data was available, but insights were missing.*

📌 **Why it matters:** Poor visibility leads to inefficient routes, low seat utilization, and revenue loss.



Data Preparation & Analysis

- ***Reviewed and validated raw airline flight records***
- ***Cleaned and structured data using Excel***
- ***Standardized carrier, route, and airport fields***
- ***Created pivot-based, KPI-ready datasets***
- ***Prepared data for Power BI and Tableau dashboards***



Insight: Weekend flights show consistently higher load factors → opportunity for dynamic pricing.



Highcloud Airlines Analysis Dashboard

Total Airlines
1,10,849

Load Factor
76.80%

Operating Regions
6

Total passenger
187M

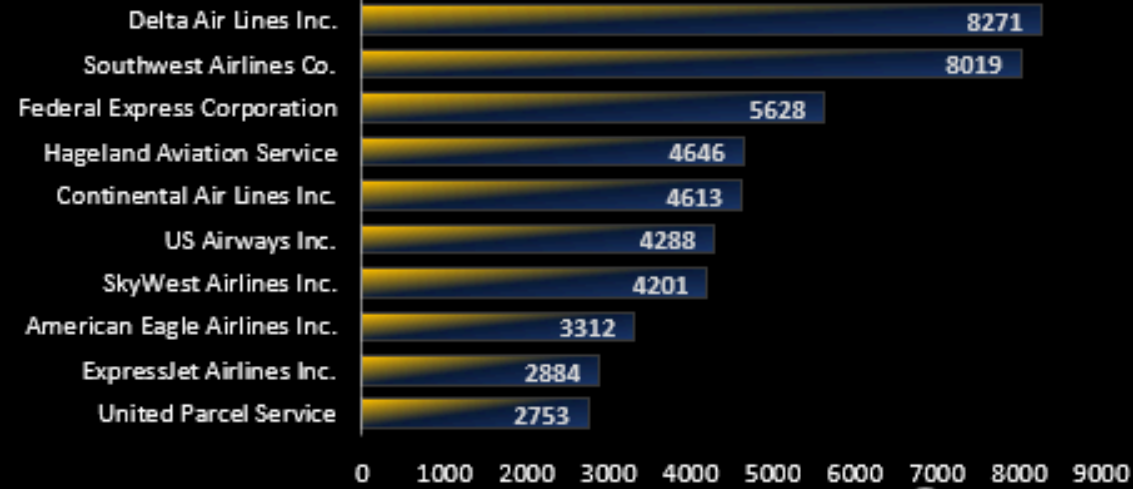
Seats
244M

Quarter
Q1

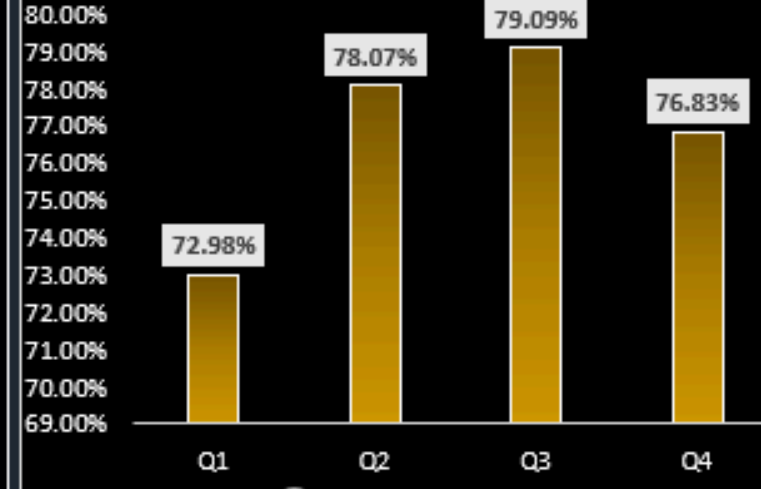
Destination Cou...
Afghanistan
Angola
Anguilla
Antigua and Barbuda

Destination State
Alabama
Alaska
Alberta
Arizona

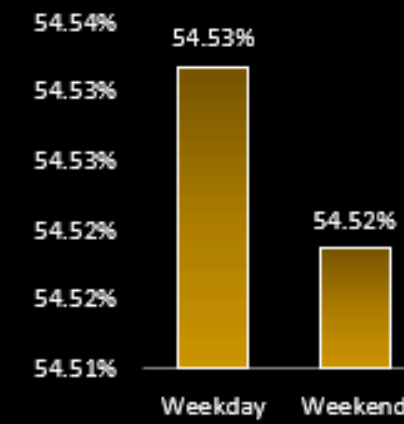
Top 10 carriers



Quarterwise Load Factor



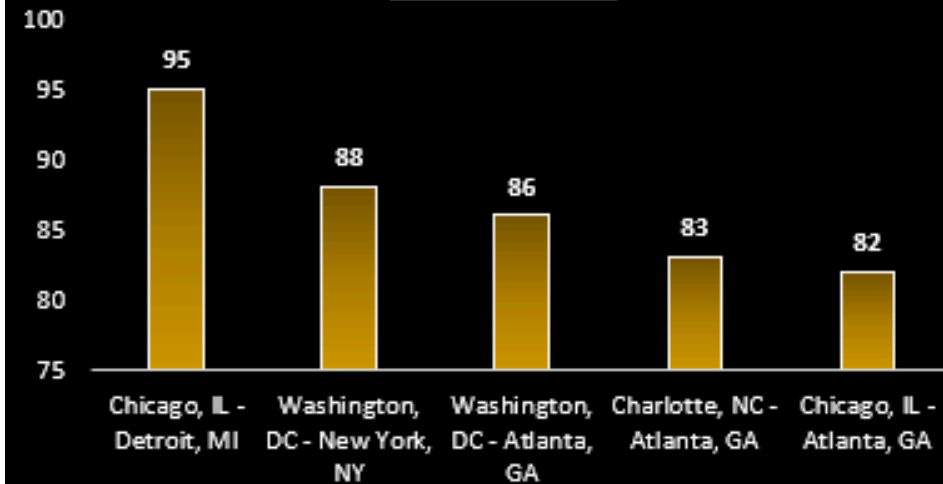
Load factor - weekdays and weekend



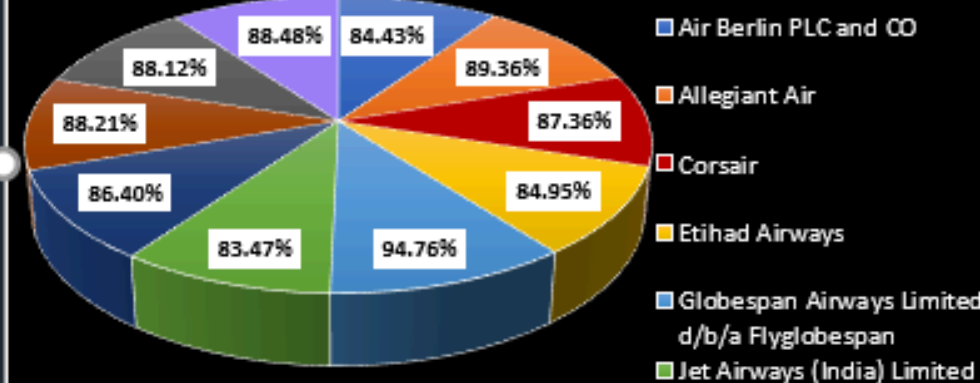
Month Name
January
February
March
April
May

Year
2008
2009
2010
2011
2012

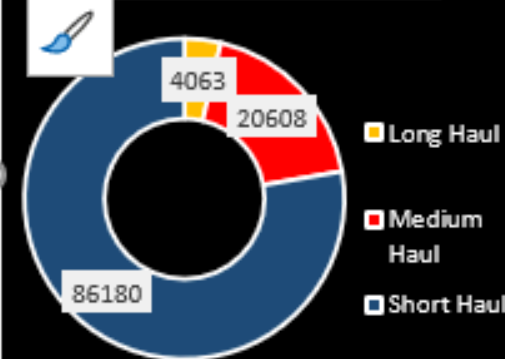
Top Routes



Top 10 carrier based on load factor



lights by distance group



Source State
Delaware
Florida
Georgia

Source Country
Angola
Anguilla
Antigua and Barb...

Destination City
47-Mile Mine, AK
Abbotsford, Canada
Aberdeen, SD

SourceCity
47-Mile Mine, AK
Abbotsford, Canada
Aberdeen, ID

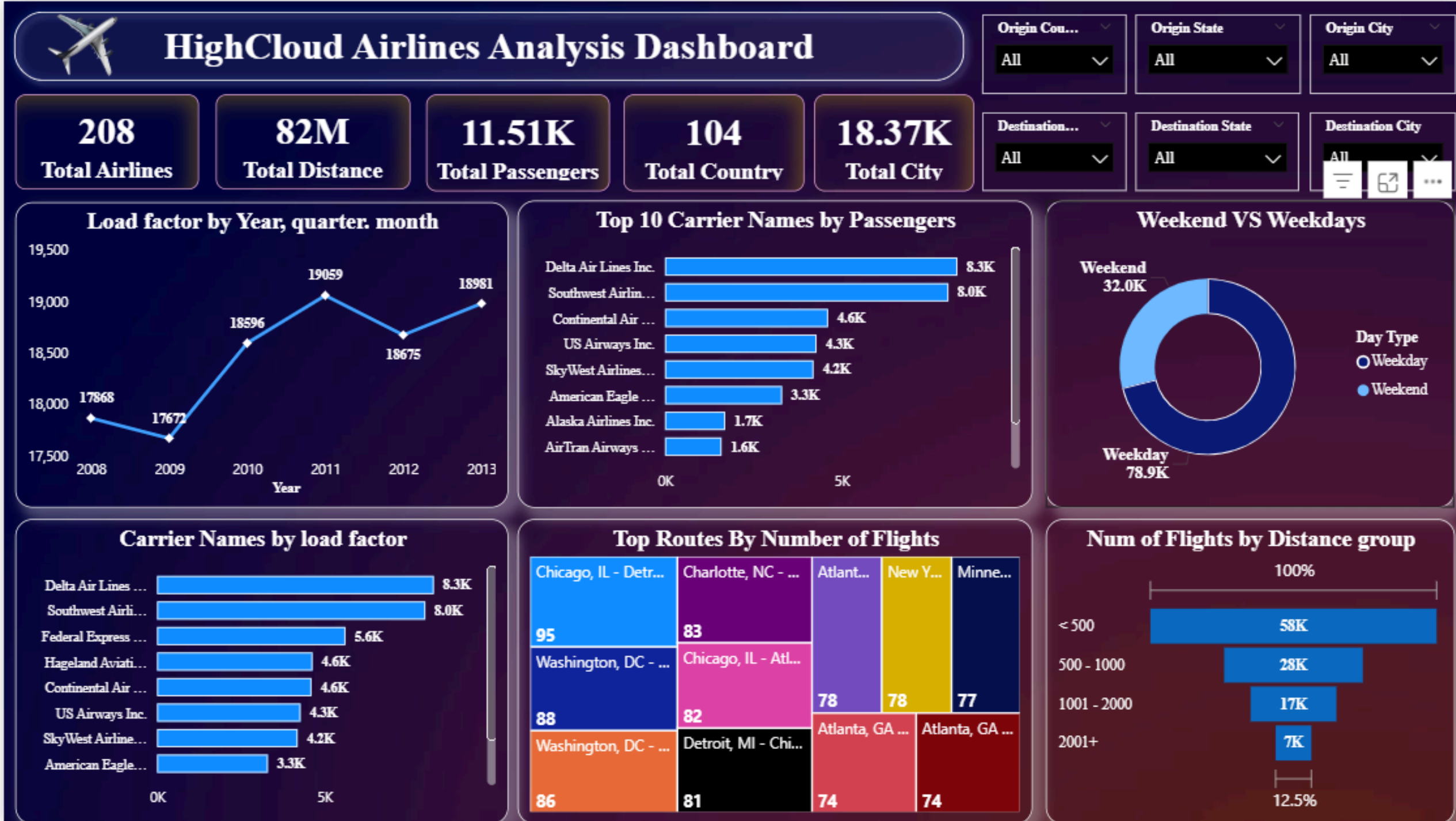
KPI ANALYSIS & INSIGHTS (EXCEL)

- Analyzed top 10 carriers by passenger volume
- Evaluated quarter-wise load factor performance
- Compared weekday vs weekend load factors
- Identified high-traffic routes and distance-based trends

Excel used for exploratory KPI analysis



Key Insight: Load factor peaks in Q3, and weekends consistently outperform weekdays.

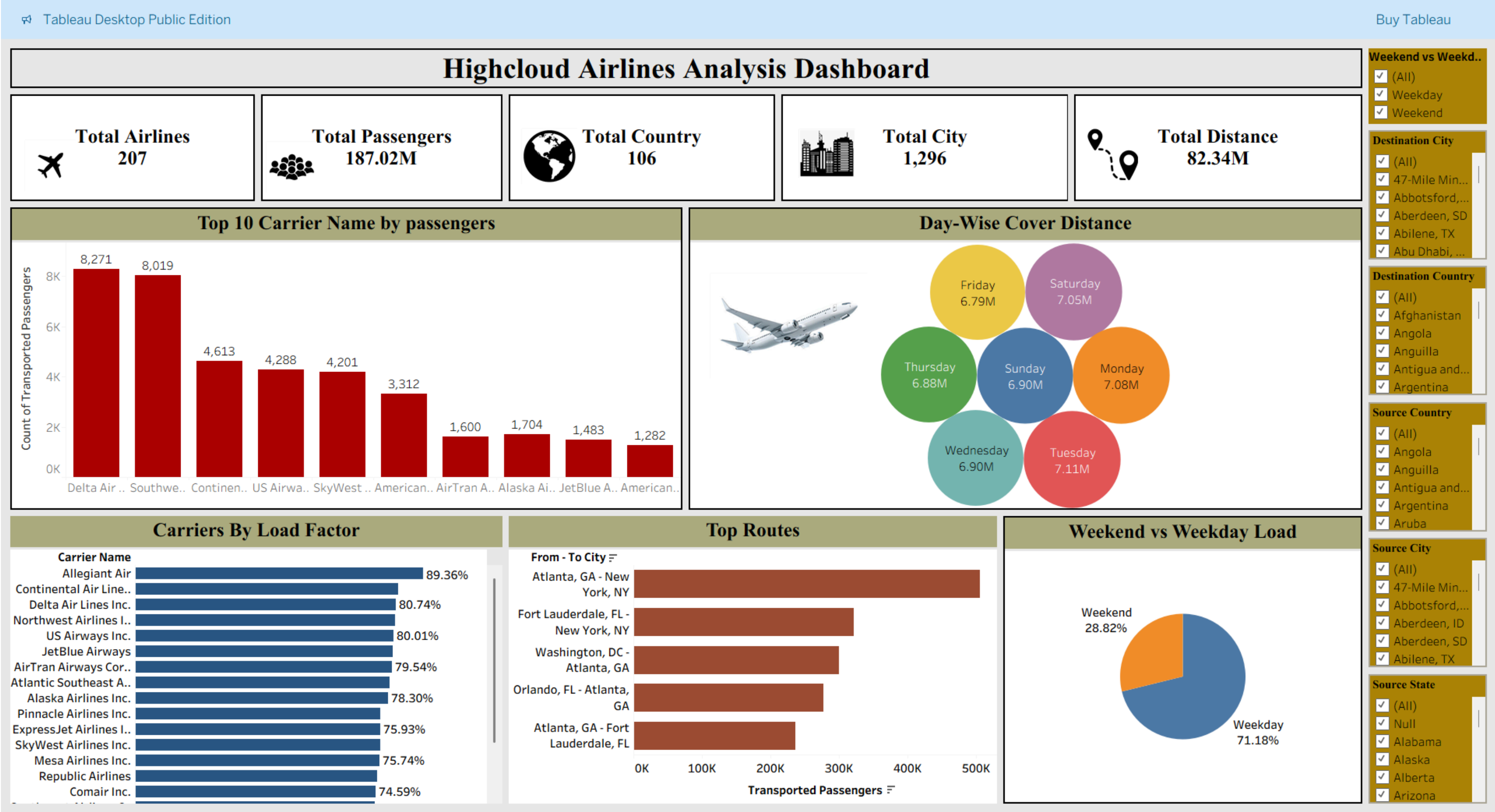


Business Value: Enables faster identification of high-performing routes and carriers.

INTERACTIVE DASHBOARD (POWER BI)

- Built an executive-level interactive dashboard in Power BI
 - Integrated cleaned Excel data into a semantic model
 - Designed KPI cards for Load Factor, Passengers, Seats & Regions
 - Enabled drill-down analysis using filters and slicers
 - Delivered dynamic insights for faster business decisions
- Power BI used for scalable, interactive analytics*

VISUAL STORYTELLING WITH TABLEAU



DATA ANALYSIS USING SQL

```
select weekday(flight_date),flight_date from airlines;
```

```
select sum(load_factor),weekday(flight_date) from airlines
group by 2;
```

```
select
case
when weekday(flight_date)>4 then "weekend"
else "weekday"
end as day_type,
sum(load_factor) from airlines
group by 1;          #6#
```

```
40      from airlines;          #1#
41
42 • select flight_date from airlines;
43
44 • select avg(load_factor), year(flight_date) from airlines
45      group by 2;
46
47 • select avg(load_factor),quarter(flight_date) from airlines
48      group by 2;
49
50 • select avg(load_factor), quarter(flight_date) from airlines
51      where year(flight_date)=2009
52      group by 2;
53
54 • select avg(load_factor),year(flight_date),quarter(flight_date) from airlines
55      group by 2,3
56      order by 2,3;
57
58 • select avg(load_factor), month(flight_date) from airlines
59      group by 2;          #2#
```

```
select
case
when distance<=500 then "short haul"
when distance>500 and distance<=2000 then "medium haul"
else "long haul"
end as haul_type,
count(flight) from airlines
group by 1;          #7#

desc airlines;
select flight from airlines;
```

THANK YOU

✨ Turning airline operations data into
actionable business decisions.

Get In Touch



<https://github.com/AdityaTade26>



adityaatade@gmail.com



Pune ,Maharashtra

