

The Return of the Maharaja?



Sarah Lee
Rohan Giri
Agnitra Das
Saaket Joshi
Jyoti Kumari
Soham S. Bidyadhar

AGENDA

1. Business Overview
2. Business Problem
3. Data Scraping
4. Framework
5. Analysis
6. Conclusions



Pre-takeover Blues

- **Financial Trouble:** Heavily in debt and losing money for years.
- **Operational Issues:** Outdated planes, inefficient operations, overstaffed.
- **Poor Service:** Reputation hurt by frequent delays and poor customer service.
- **Lagging behind Competition:** Couldn't keep up with private Indian/international carriers.

As a result, the government saw selling Air India as the only way to save it from further decline.



Air India restructuring timeline

- Tata Group reclaims Air India
- Started leadership restructuring

Jan '22

Mid '22

- Acquisition of AirAsia India
- Vistara merger with Singapore Airlines

Nov '22

- Vistara merger completion
- Positioning Air India as a premium global airline

Feb '23

- Launched Vihaan.AI, a 5-year turnaround plan
- Fleet expansion with leased aircraft

Mar '24

- Record order of 470 aircraft from Airbus and Boeing
- \$200M tech upgrade investment

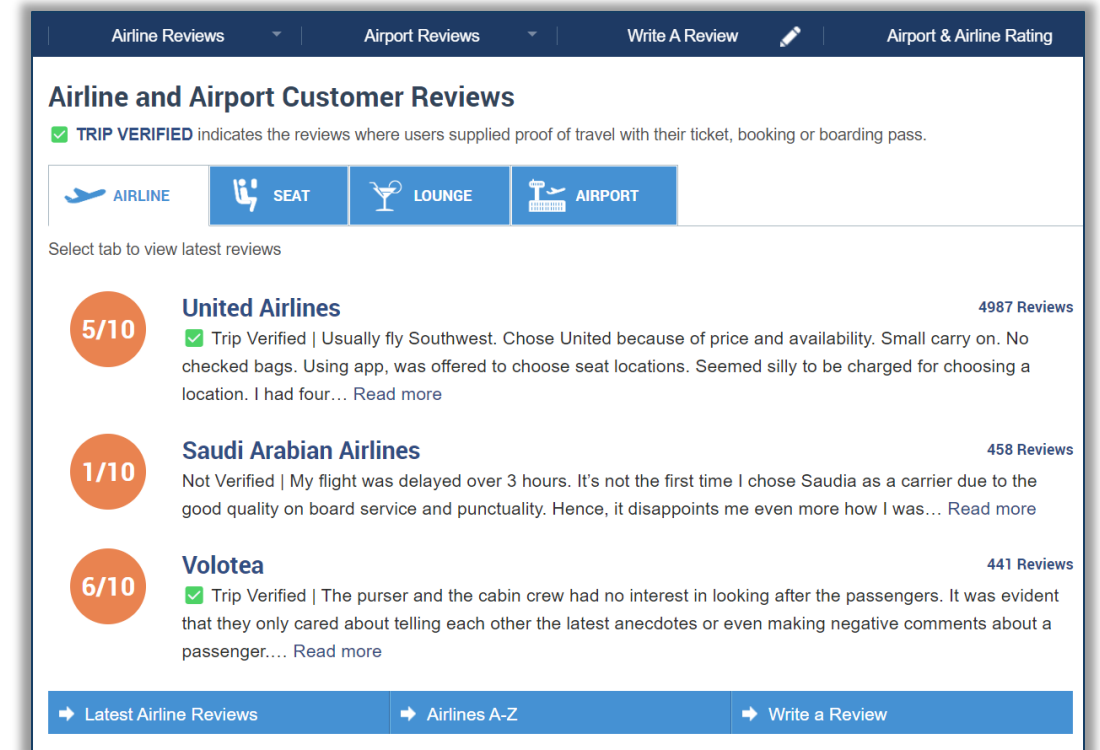
Post restructuring, is there an alignment with consumer perception?

Can we validate consumer perception of Air India using a data-driven approach to drive customer experience?



Scraping methodology

- Scraping website – 
- Skytrax reputed for airline and airport reviews
- Scraping conducted using Selenium
- ~1500 reviews and user ratings scraped
 - Timeline - 2011 to 2024
- Raw dataset cleaned
 - Removal of stopwords using nltk
 - String preprocessing using regular expressions



Methodology

Framework used

Pre-defined
attribute
mapping

Mapped most frequent
words into 7 key attributes

Word
Frequency
Count

Top 100 most frequently
mentioned words

Sentiment
Analysis
(VADER)

Measured positive/negative
sentiments



Derived Analysis

Attribute
composition
contribution

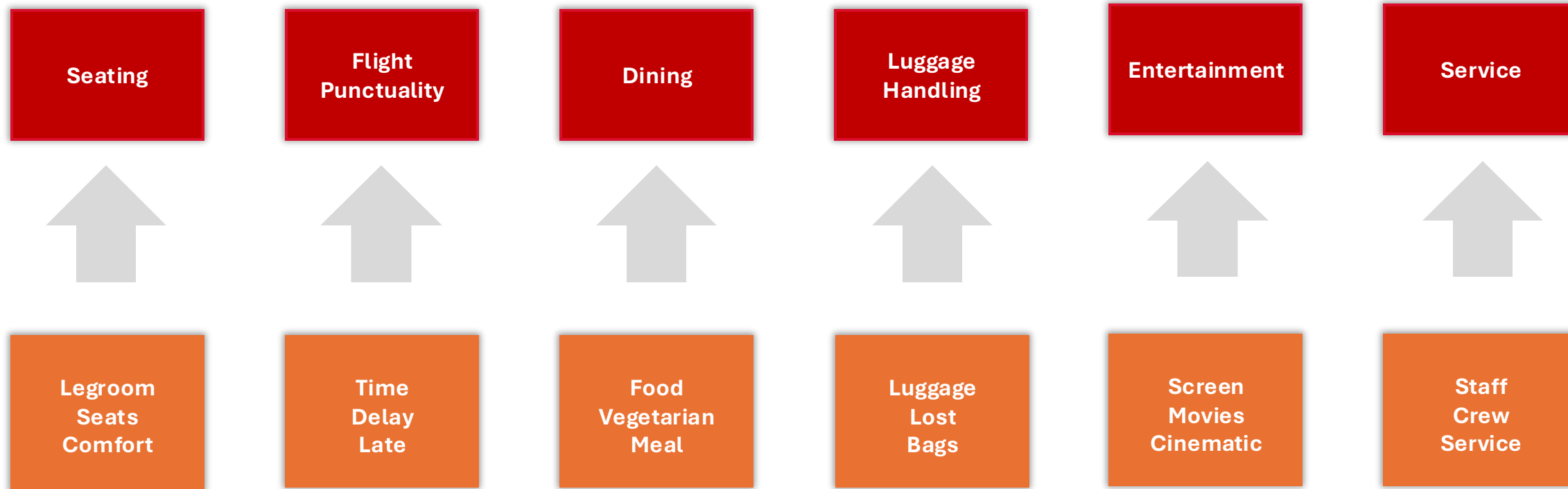
Compared changes in specific
attributes

Time Series
Analysis

Tracked pre and post takeover
sentiments

Attribute mapping

Attributes

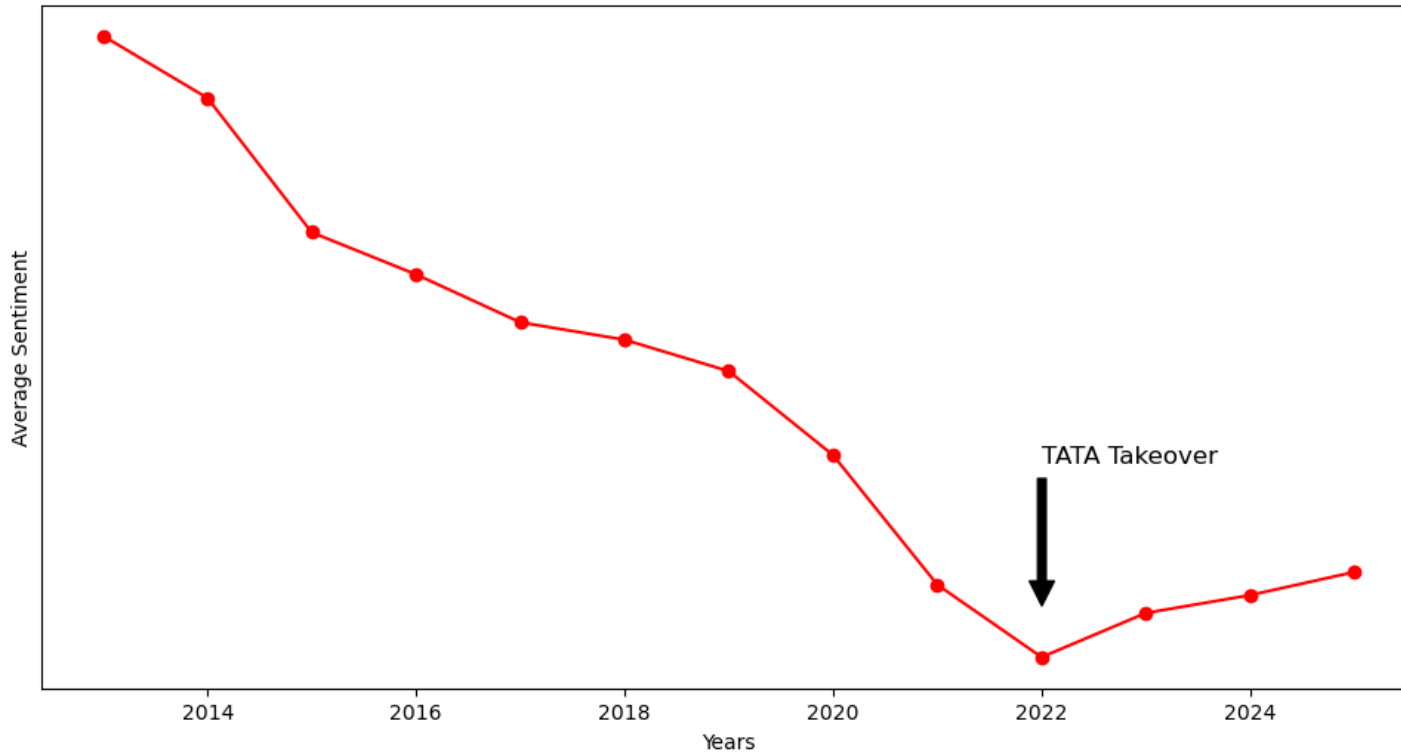


Mapped words

Time Series Analysis - Sentiment

3-Year Moving Average Sentiment time series

3-Y Moving Average Sentiment



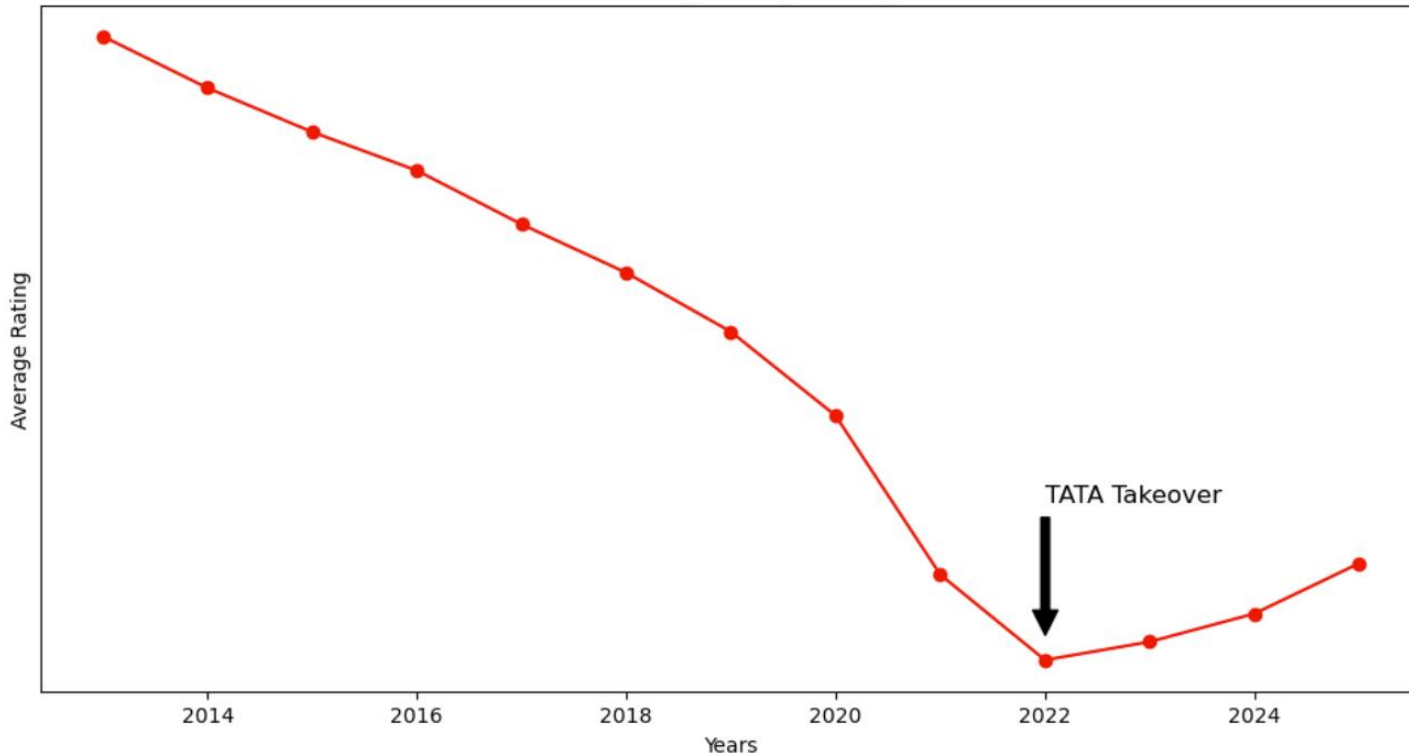
Key Insights

- Steady decline in sentiment from 2013 to 2022, suggesting gradual deterioration in customer perception and satisfaction
- Noticeable improvement in sentiments post-TATA takeover indicating potential positive changes recognized by customers
- These improvements likely reflect early efforts by management to enhance service quality and operational efficiency

Time Series Analysis - Ratings

3-Year Moving Average Rating time series

3-Y Moving Average Rating

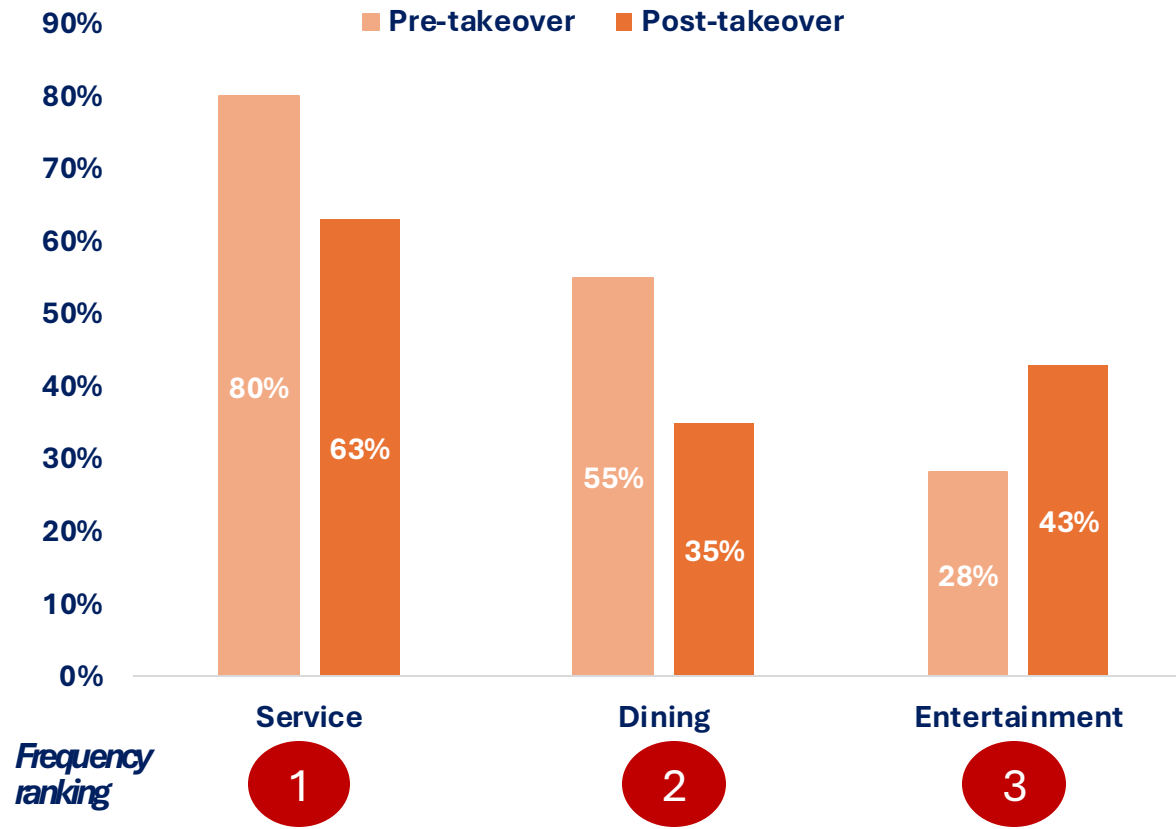


Key Insights

- Steady decline in ratings from 2013 to 2022, suggesting increasing customer dissatisfaction.
- Noticeable improvement in ratings post-TATA takeover, indicating potential positive changes in customer satisfaction.
- These improvements likely reflect early efforts by management to enhance service quality and operational efficiency.

Attribute composition analysis

Top attribute mentions among negative sentiment reviews-



**Following attributes selected are within top 100-word frequency*

Key Insights

- Pre-takeover & Post-takeover, service had the most number of mentions, making it a key driver for customer experience
- Rise in entertainment (15% increase) related mentions post-takeover suggests its importance as a growing aspect of the overall customer experience
- Dip in dining (20% decrease) mentions post-takeover indicating possible shift in customer focus or priorities

Major Issues – Pre takeover



Service

- Rude staff behavior
- Improper hygiene
- **Lack of communication** regarding flight delays
- **Inadequate support** for passengers with special needs
- Poor **baggage handling**
- **Refund** for cancelled trips and lost baggage taking months

"...There was no announcement or notification about the delay until we had already been waiting for over an hour."



Dining

- **Poor quality** of food served
- **Lack of options** for long-haul flights
- Long-haul flights often experiencing **meal shortages**

"...The meal options were very limited, and they ran out of non-veg options before reaching our row."



IFE

- Lack of screens for long-haul flights
- **Unclean headphones, broken screens and remotes**
- Staff unable to troubleshoot malfunctioning

"...My screen was broken, and the flight attendant couldn't do anything about it, leaving me without entertainment for the whole journey."

Improvements – Post takeover



Service

- Polite, attentive, and professional staff
- Proactive in **helping passengers**, especially elderly and special-needs cases
- Refurbished interiors and **improved restroom** maintenance
- Proactive updates on delays and **better transparency**



Dining

- **Flavorful meals** with larger portions
- Use of **steel cutlery** enhances premium feel

Still need to work on...

In-Flight Entertainment

- Some passengers still report non-functioning or outdated screens

Timeliness

- While communication is better, flight delays remain common

Aging Fleet

- Cabin interiors show signs of wear; fleet refurbishment still in progress



External Analysis 1 – Customer sentiment post takeover

Anitesh Barua
15 June · 🌐

The reincarnation of the Air India Maharaja? I flew Air India from Chicago during COVID when other airlines were not operating in and out of India. It was a forgettable experience, where business class seats were only marginally better than economy seats and where the nonchalant attitude of the staff and crew would make you wonder why anybody would ever fly with this airline.

But I was in for a very different experience during this week when I flew on two domestic Air India flights. Courteous and cheerful flight attendants, quality food, on-time (before time, actually) departure and arrival ... what's not to like here? Add to that the fact that its domestic flights use the international terminals in India, saving you the hassle of changing terminals if you are catching or getting off an international flight. A big Thank You to the Tatas for their effort to revive what used to be a matter of national pride in the 1960s.

My only gripe? Us, the passengers. 😊 Air India appears to be a significantly improved airline today, but what about us?

Old Air India logo source: grownxtdigital.in



Business Class & First Class Flights. Deals & More.... · [Join](#)
Stefan Stingeder · 23 September at 11:56 · 🌐

A Refreshing Experience with Air India Business Class on the Boeing 787

I recently had the pleasure of flying Air India's Business Class on the Boeing 787 from Delhi to Copenhagen, contrary to many reviews I've read, my experience was overwhelmingly positive.

Firstly, I must mention the food, it was simply outstanding. The selection of dishes was not only diverse but also very well-prepared, reflecting authentic Indian flavors as well as international cuisine. ... [See more](#)

1.1K 117 comments 25 shares

External Analysis 2 – Customer sentiment post takeover



Anish P wrote a review Aug 2024

Brugg, Switzerland • 8 contributions



New Delhi - Paris

International

A new Air India under Tata?

I believe I might be one of the first people to give a five-star rating to an airline after missing a connecting flight due to a delay. Recently, I traveled from Delhi to Paris on AI 143 in business class, and I have to say I was pleasantly surprised by the top-quality service I received from the moment I boarded.

The cabin crew went above and beyond to provide exceptional service. I was also amazed by the quality of the food served on the flight. Not only did it look fantastic, but it tasted even better than what you'd find in some gourmet restaurants. I believe these improvements are a result of Air India's new ownership under Tata.

While the aircraft itself was a bit old, the cabin crew informed me that new planes are on the way. They were genuinely excited about working under the new ownership and seemed optimistic about Air India's future.



Sneha S wrote a review Mar 2023

Toronto, Canada • 1 contribution



Toronto - Amritsar

International

Economy

AIR INDIA HAS IMPROVED!!

Not sure if its because of Tata but the overall service has much improved!! Customer service, call time, flights attendants, food - I noticed the improvements in all departments. Conditions of the seats look better as well. Looking forward to the new Boeing planes and non-stop flight from Toronto to Amritsar launching soon!!


Love Air India and will always be a loyal customer!

Highly recommend to all as its super convenient to land in Delhi during day time.

Conclusions

- **Upward trajectory in overall customer sentiment post-takeover:** Sentiment analysis suggest noticeable improvement in customer experience
- **Enhancing dining, service, entertainment capabilities:** Dining, Entertainment, Service-related mentions had the highest frequency indicating important aspects contributing towards positive customer experience
- **Leveraging positive sentiment for brand building:** Posts from other forums such as Facebook, Trip Advisor validate positive customer sentiment thus presenting opportunities to further capitalize brand building
- **Future work and scope:** Expand sentiment analysis beyond the initial 2-year period; Exploring positive/negative sentiments by attribute when more data is available



An Air India aircraft is shown from a low-angle perspective, flying upwards and to the right. The aircraft is white with red and gold accents, including the 'AIR INDIA' text on the fuselage and a large red and gold tail fin. The background is a dramatic sky with dark, heavy clouds and a bright light source, possibly the sun, creating a silhouette effect on the aircraft. The overall mood is one of ascent and achievement.

THANK YOU!
Any Questions?