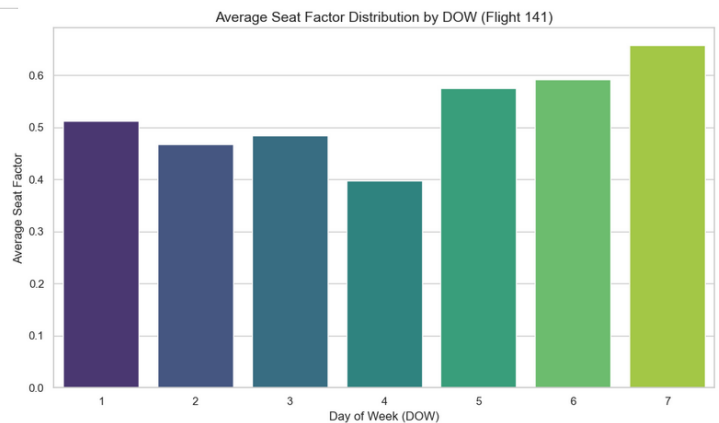
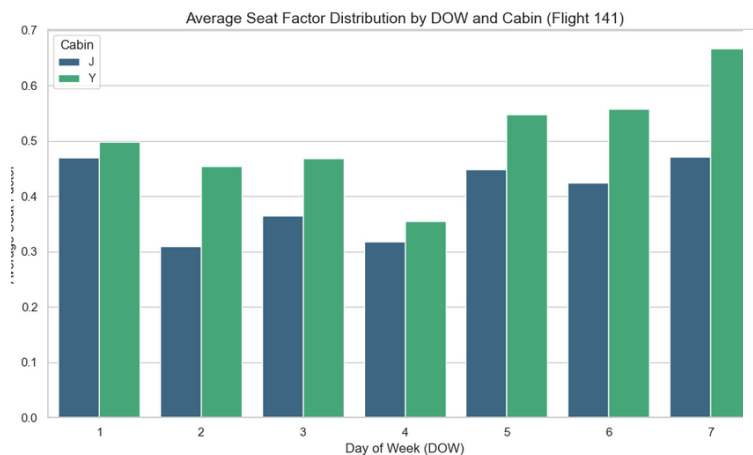


Inventory Analysis of CMB- BOM (01-Nov-23 to 01-Nov-24)

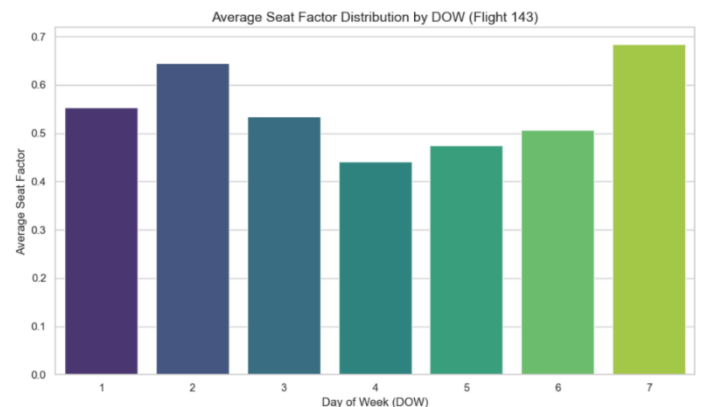
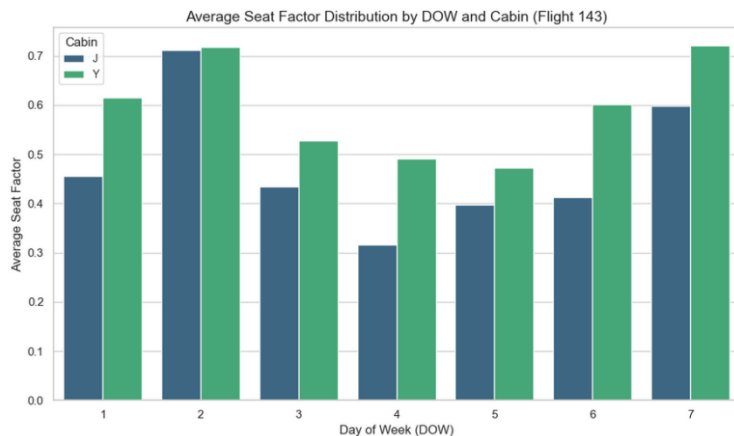
- The flight numbers of the CMB-BOM – 141, 143
 - 141 – All the days of the week. (23.40P.M – 0.210*A.M)
 - 143 – All the days of the week (5.05 P.M. – 7.45 P.M)
 - The duration of that flight is approximately 2.30 hours.
- The flight numbers of the BOM-CMB – 142,144
 - 142 – All the days (03.10 A.M – 05.35 A.M)
 - 144 – All the days (8.45 P.M – 11.10 P.M)
- Seat factor = $\frac{\text{Sum of New Brd Count}}{\text{Sum of Capacity}}$. The seat factor can give an idea about the demand for the flight. A high seat factor indicates high demand and a low seat factor indicates low demand for seat booking.

CMB-BOM

Weekly behavior of the seat factor



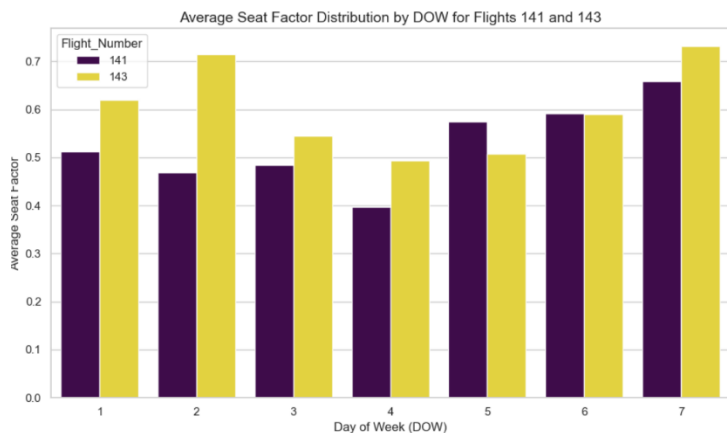
- The seat factor of flight 141. Here the highest economy class seat factor is included on the 7th day of the week. And also, this day has a high business class seat factor. **The average seat factor is above 0.6**



- In flight number 143 . Here in the 2nd day of the week business and economy cabin average seat factors are high and both average seat factors are approximately the same (0.7). And, the 7th day economy cabin average seat factor is the highest seat factor, and it also has a high business cabin average seat factor.

- On 2nd and 7th days of the week average seat factors are above 0.6

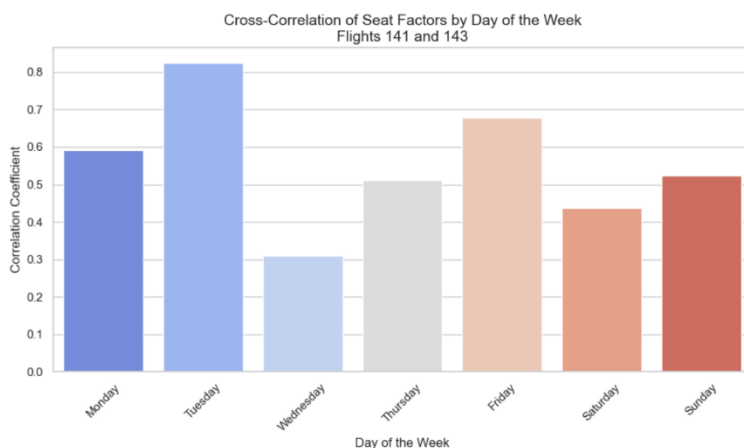
- ❖ Higher seat factors on Sunday (Day 7) are likely due to increased weekend leisure travel, with passengers traveling for leisure, family visits, or short vacations between Colombo and Mumbai.
- ❖ The CMB to BOM route sees significant **business travel** during weekdays, with finance, trade, and technology professionals. Business travelers often book flights around meeting schedules, leading to steady demand but not always full flights.



- Flight 141 is a mid-night flight and 143 is an evening flight. Most of the passengers booked the evening flight compared with the other flight.

Reasons:

- This can be attributed to factors such as convenient timing, the higher demand from business and leisure travelers, better connectivity options, and passenger preference for more comfortable travel hours.



High correlation on Tuesday and Friday: These are peak travel days when both flights cater to a similar mix of passengers, leading to strong alignment in occupancy trends.

Low correlation on Wednesday: The divergence in demand suggests that the two flights may cater to different passenger profiles or destinations on this day.

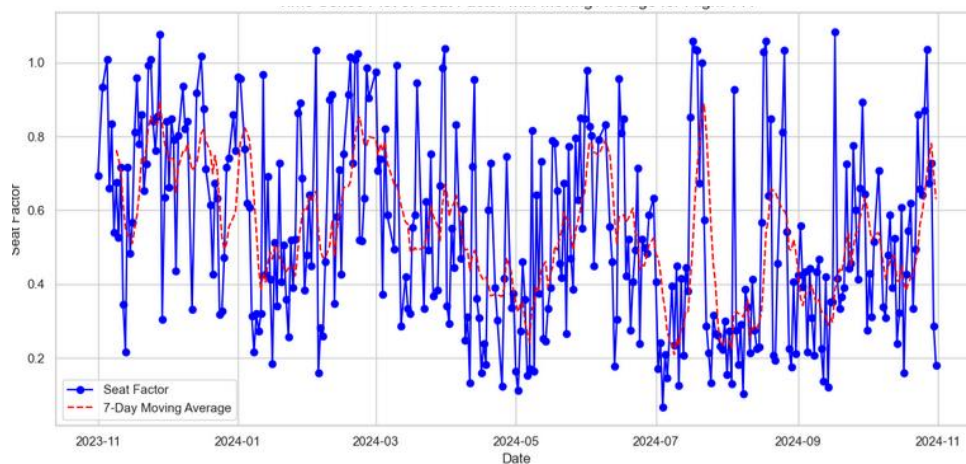
Moderate correlation on other days:

Flights show partial alignment due to shared factors such as operational strategies, overlapping routes, or spillover demand, but variations exist due to differing schedules or demographics.

- ❖ Flights with high correlations (e.g., Tuesday, Friday) might indicate overlapping demand segments or operational dependence.
- ❖ Low correlations (e.g., Wednesday) suggest distinct demand patterns, possibly requiring different marketing or operational strategies.

Seat factor month-wise behavior

Flight 141

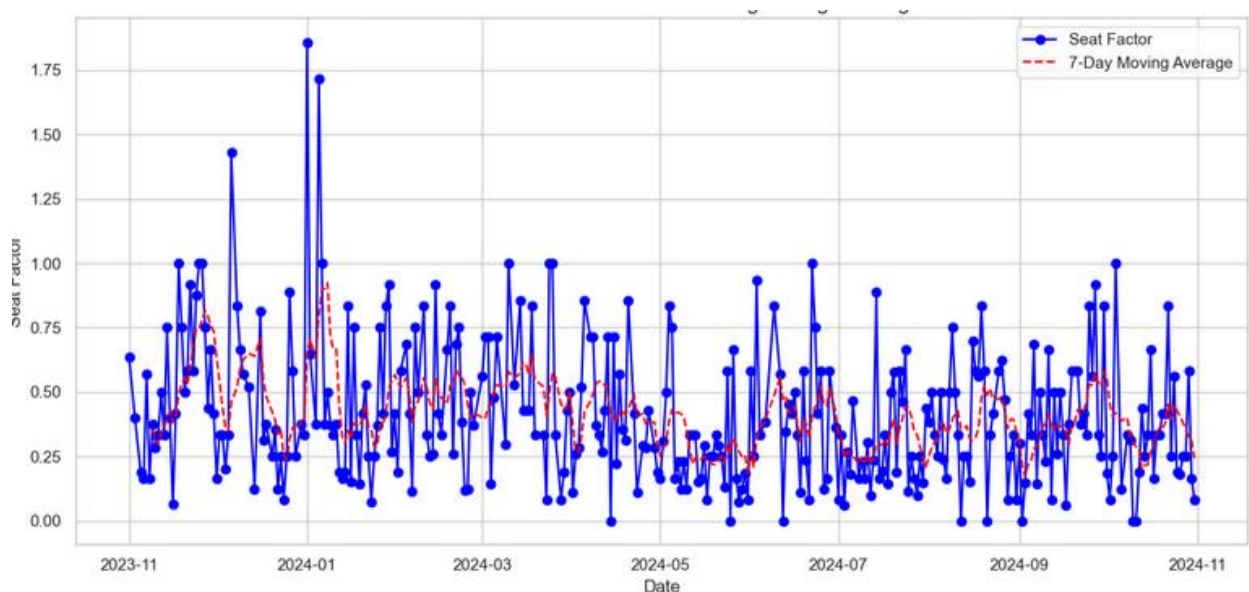


Hall the year had a wider seat factor range.

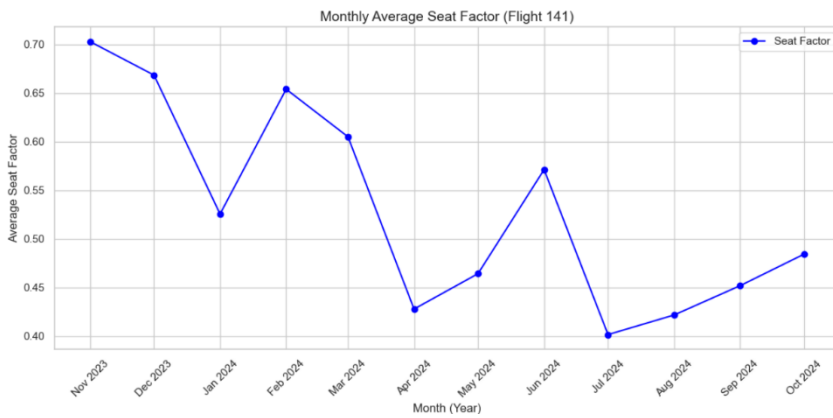
At the beginning of July month had the lowest number of booking scenarios.

Considering that some months at the beginning of February, middle of July, September, and end of October had a seat factor of almost 1 that implies flights are booked fully.

The months of April and June most had the number of low-demand seat bookings. Because the seat factors are below 0.4.



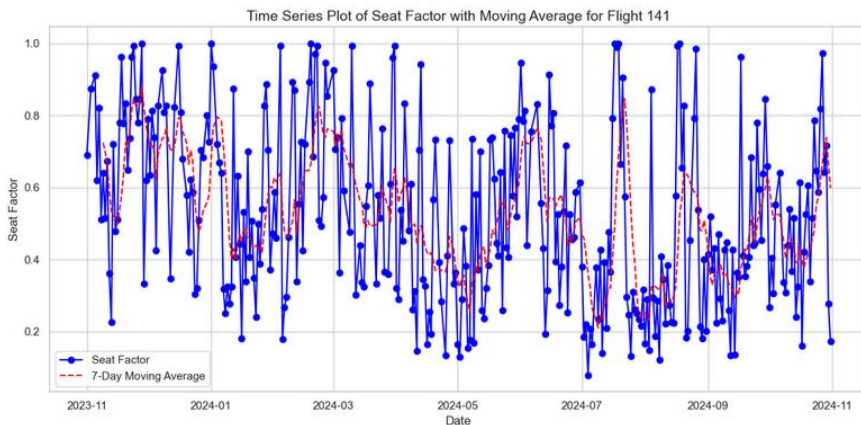
BC class, At the beginning of January had unexpected seat factors. These values are above 1.5.



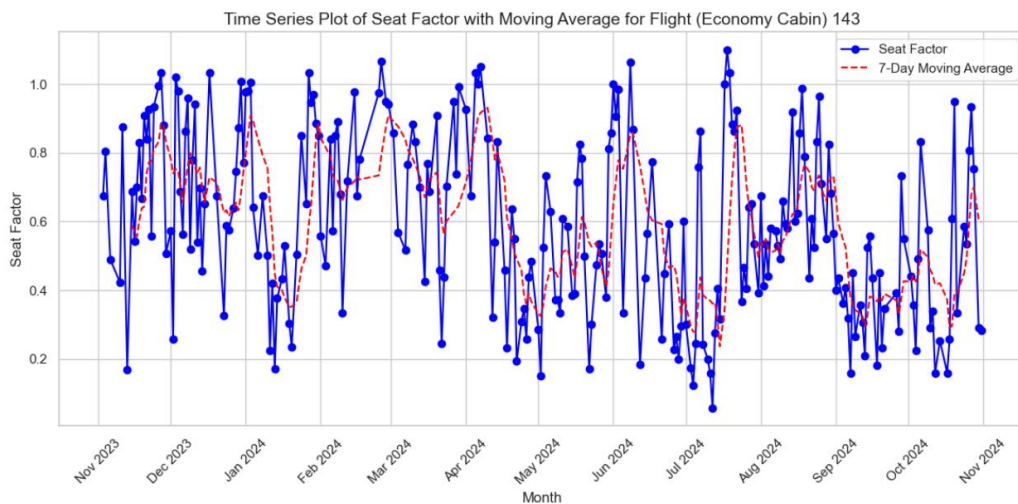
Average seat factor,

High Demand Period (November to December): This period sees a surge in travel between Colombo and Mumbai due to the Christmas and New Year holidays, along with school vacations and business travel. The festive season drives both leisure and corporate travelers.

Low Demand Period (April to May & June to October): Travel demand is lower during this time, mainly due to the monsoon season in Mumbai, the end of school holidays, and a slowdown in business travel.

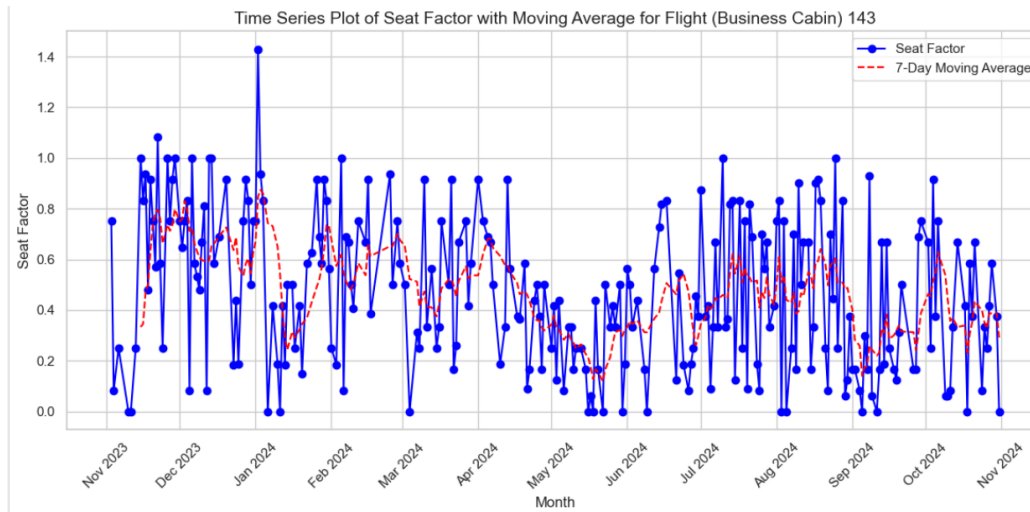


Flight 143

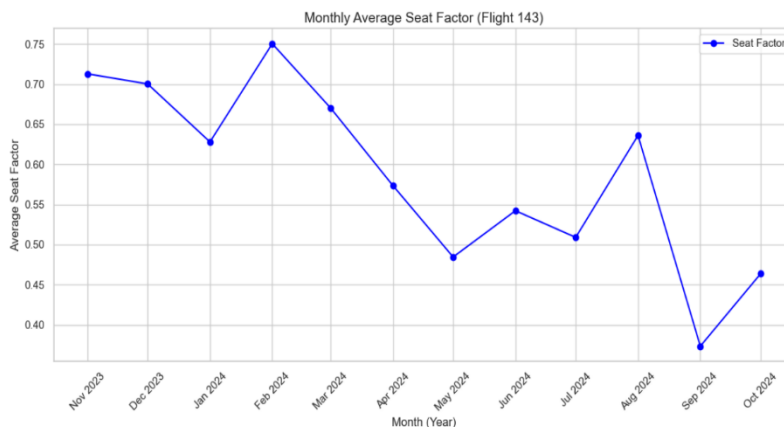


In the Economy class, from the middle of April to June there was a low seat factor, range between 0.2 to 0.5.

Considering Nov to January had approximately high seat factor above 0.6

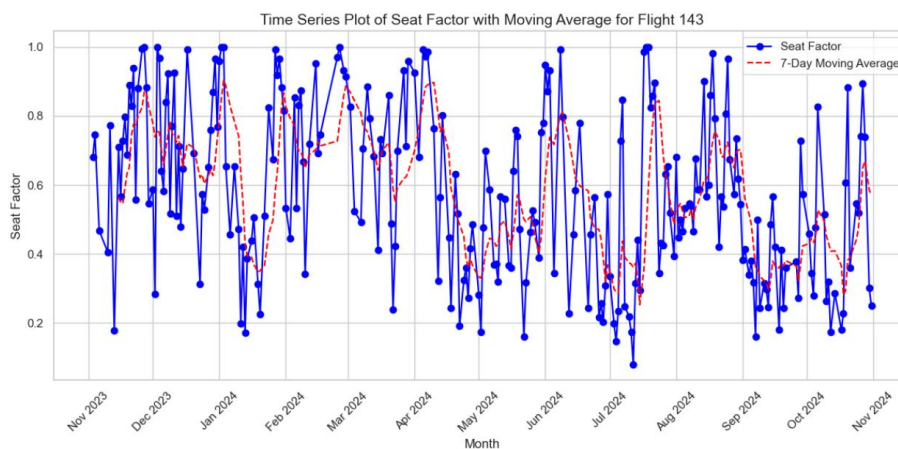


In the economy class, the average seat factor typically fluctuates between 0.4 and 0.8



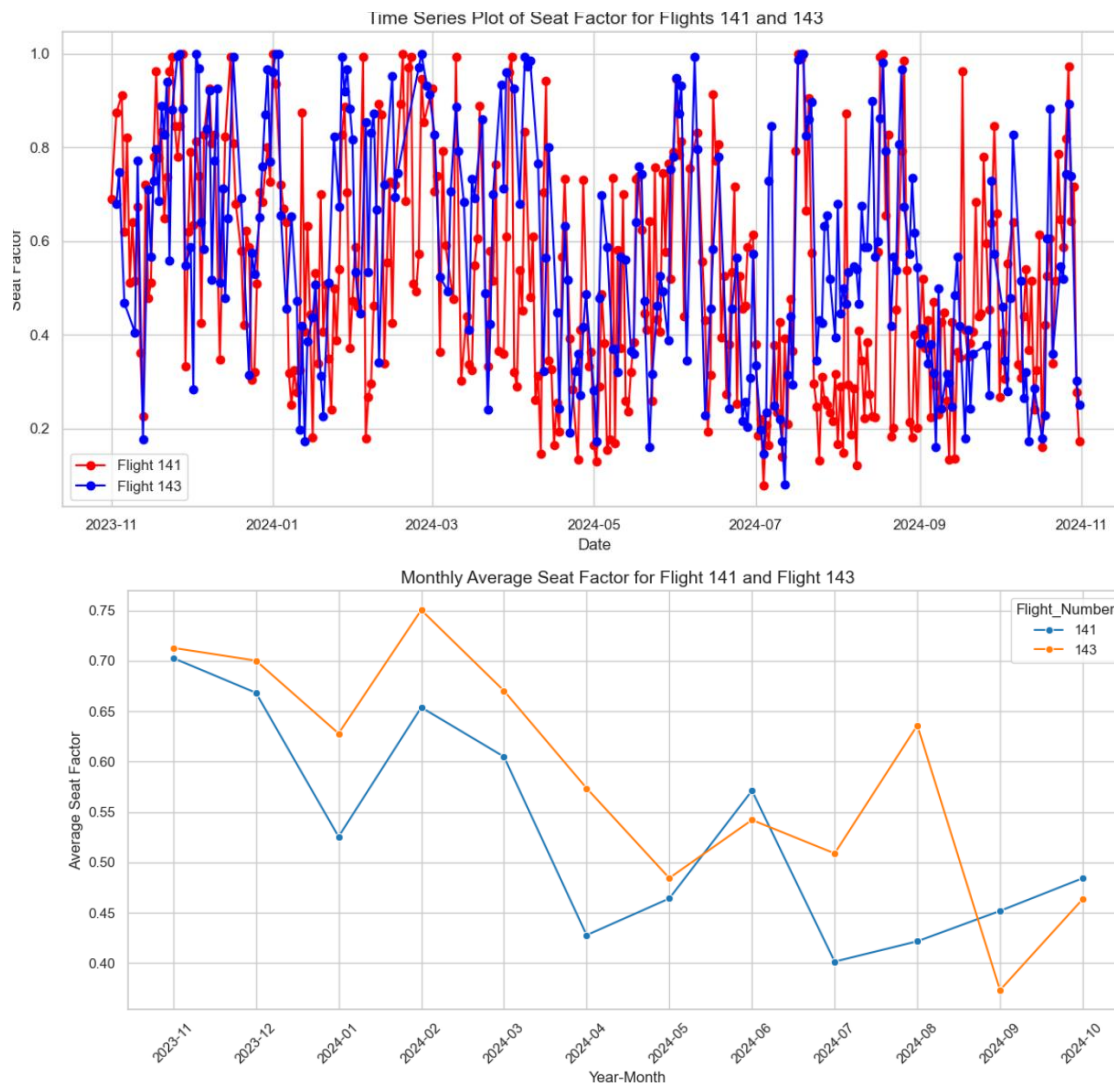
In average seat factor,

High Demand Period (November to January): The high demand for flights during December and January is driven by the holiday season, including Christmas and New Year celebrations, school and office breaks, cultural festivals, and a surge in tourism. Many people travel to visit family or take vacations, increasing passenger numbers.



Low Demand Period (April to June): The middle months of the year typically see lower flight demand due to a lack of major holidays, fewer school breaks, and a dip in business travel. Additionally, weather conditions like the rainy season can deter leisure travel, contributing to the overall decline in passenger volume.

Monthly comparison between the CMB-BOM two flights 141 and 143

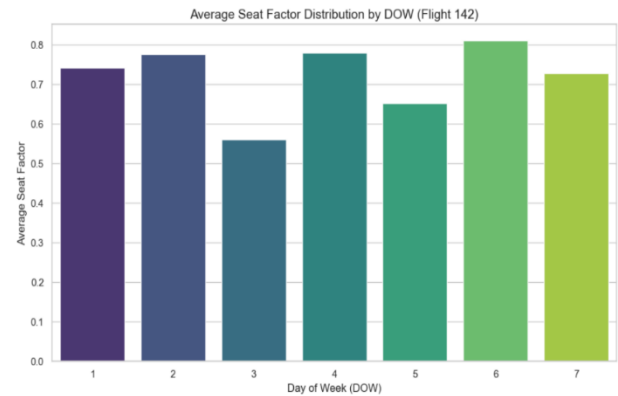
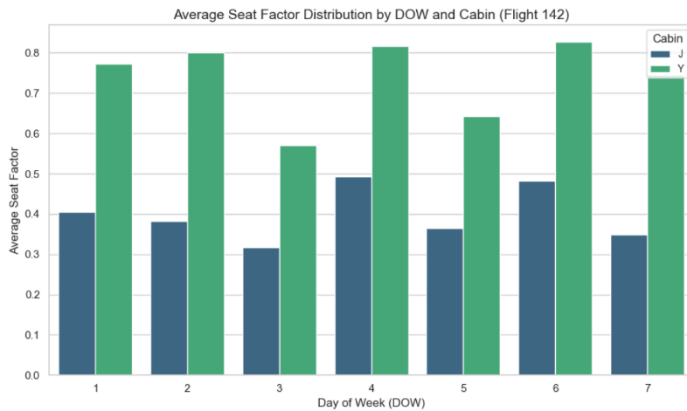


The two flights' demands are approximately similar in **terms of seasonal variations and peak travel periods**, with both experiencing fluctuations based on **tourism seasons, business travel spikes, and special events**.

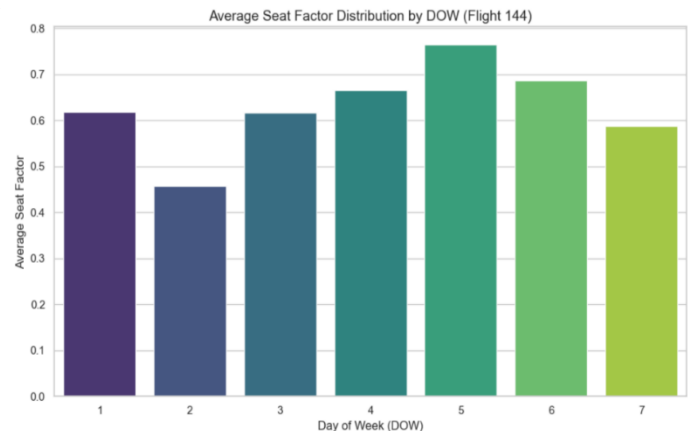
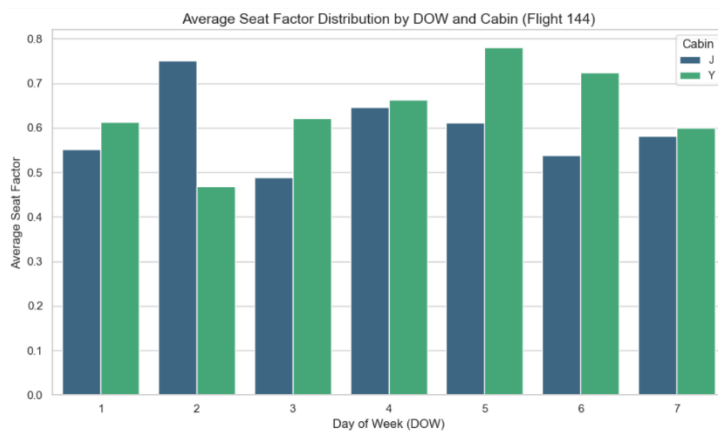
Only during July and August does the average seat factor exhibit distinct levels compared to other months. This difference in passenger preferences and demand based on flight timing can lead to distinct seat factor levels between these months.

The high demand for flights in February can be attributed to several factors: festivals like Maha Shivaratri boosting domestic travel within India, the peak winter travel season attracting tourists to warmer destinations, and an increase in business travel due to conferences and events, particularly in Mumbai.

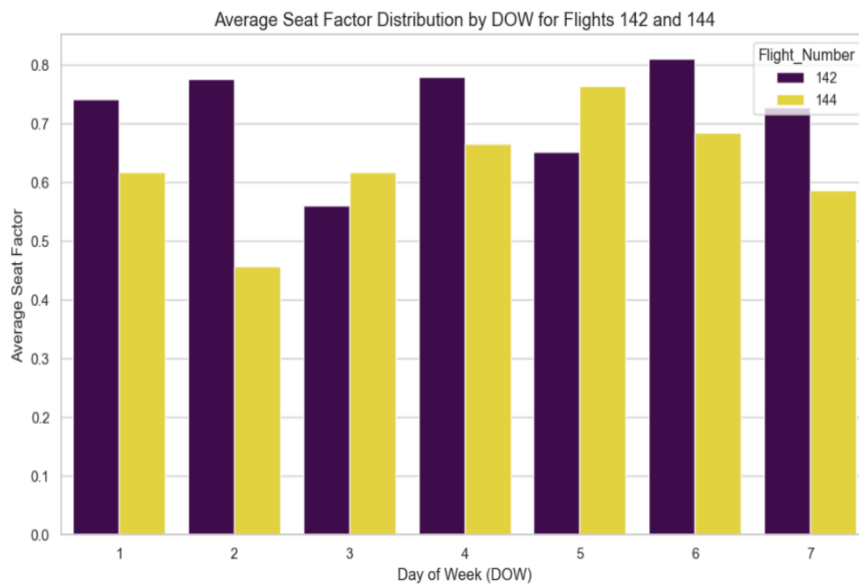
BOM-CMB



- Here 142 flight all business class seats are low compared to the economy class seat factor. Business class all seat factors are below 0.5. **Then the average seat factor is also above 0.5. And the demand for that seat factor is high.**
- ❖ This flight maintains high seat factors on most days, particularly on Days 2, 4, and 6, suggesting it caters to both business and leisure travelers.
- ❖ The high seat factor on Day 4 (Wednesday) indicates a strong presence of business travelers who prefer midweek travel.
- ❖ Days 6 and 7 show increased demand, likely due to weekend leisure travelers returning home or starting their trips.



- These economy and business class seat factors have approximately 0.5 seat factors. Then the demand for that flight is high.
- ❖ The spike on Day 5 indicates that passengers might be planning extended weekend trips or prefer traveling towards the end of the week.
- ❖ This could be due to fewer business travelers and minimal leisure travel demand early in the week.
- ❖ Moderate seat factors on Days 6 and 7 suggest that while this flight is used for weekend travel, it might not be the primary choice compared to other flights.

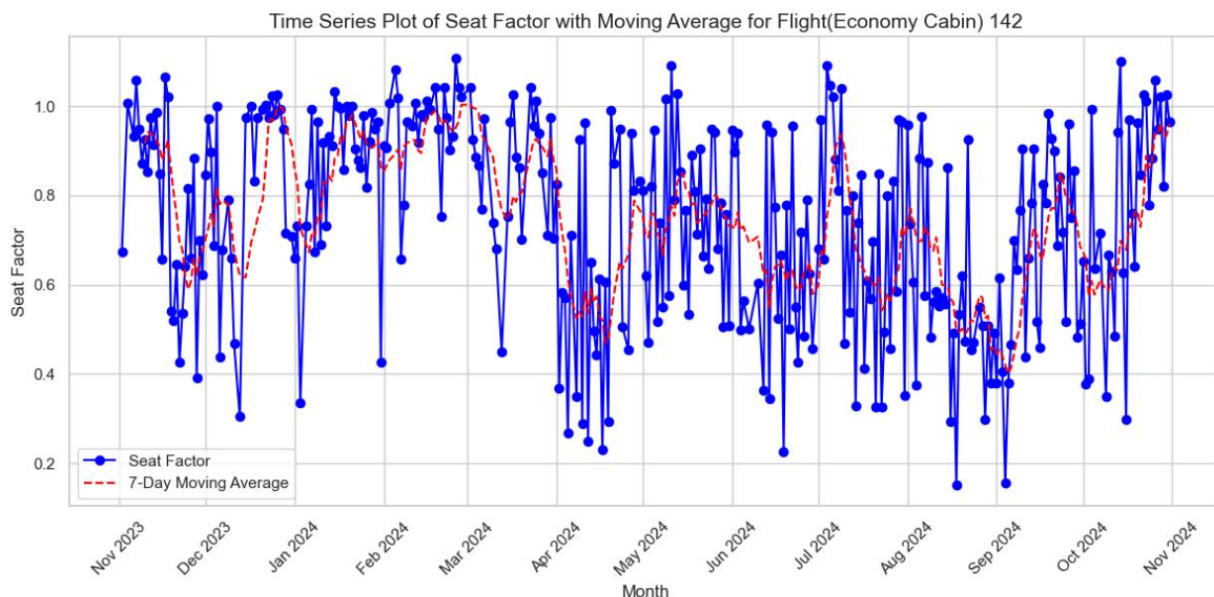


Both flights have high seat factors. Then these flights have good demand. The 142 flight is an early morning flight and the 144-night flight. Most of the passengers used early morning flights.

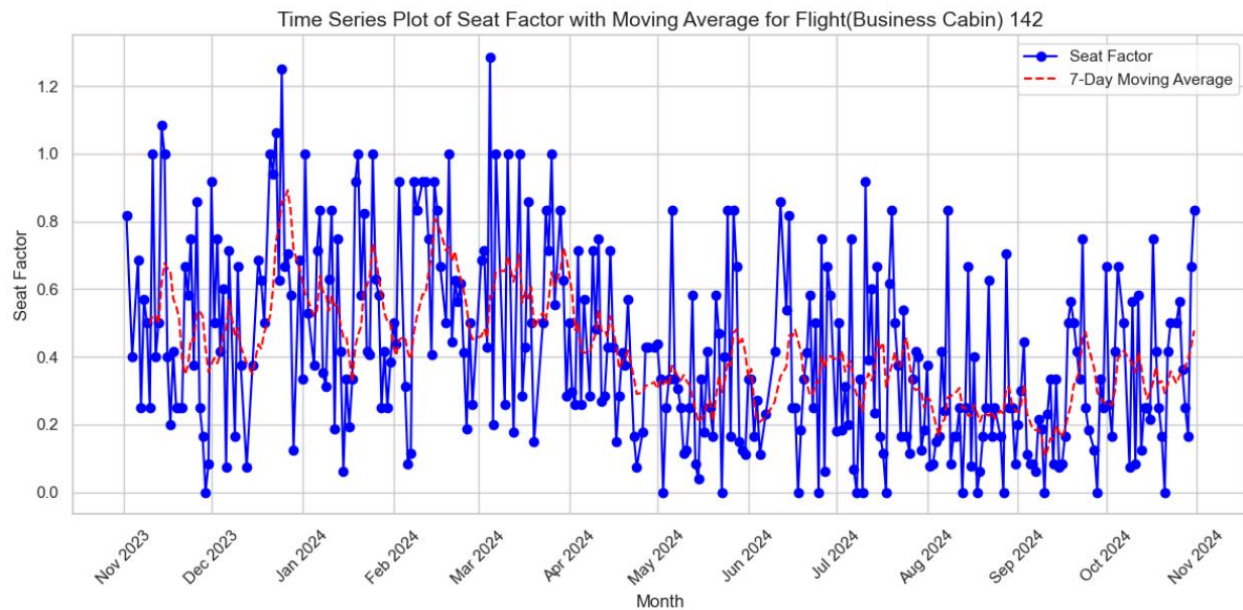
Reason: Time preference of passengers, early morning flight, which might be preferred by passengers looking to make the most of their day, arrive at their destination early, or connect with other flights. Morning flights often cater to business travelers who prioritize early starts.

Seat factor month-wise behavior

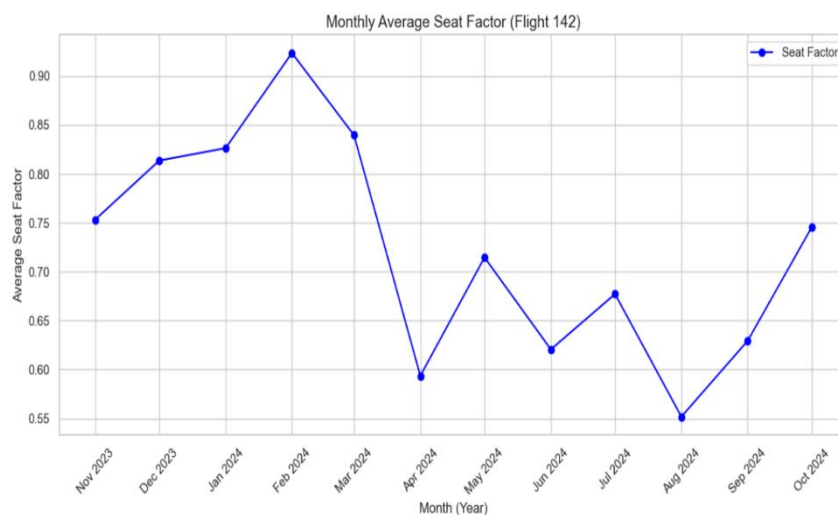
Flight 142



- In the economy cabin, the seat factor remains relatively high (above 0.6) during the November to April season.
- The seat factor decreases significantly in April compared to other months.
- Towards the end of the year, the seat factor increases again, indicating higher demand.



- Higher seat factors are observed from November to April, indicating stronger demand for business cabin bookings in this period.
- A decline is noticeable from May through August, suggesting reduced demand during these months, possibly due to off-peak travel seasons.
- Peaks in the winter months (December–February) might indicate increased business or leisure travel.
- The lowest seat factors are observed around mid-year (June–August), suggesting lower business travel activity, possibly due to summer holidays or a downturn in business events.



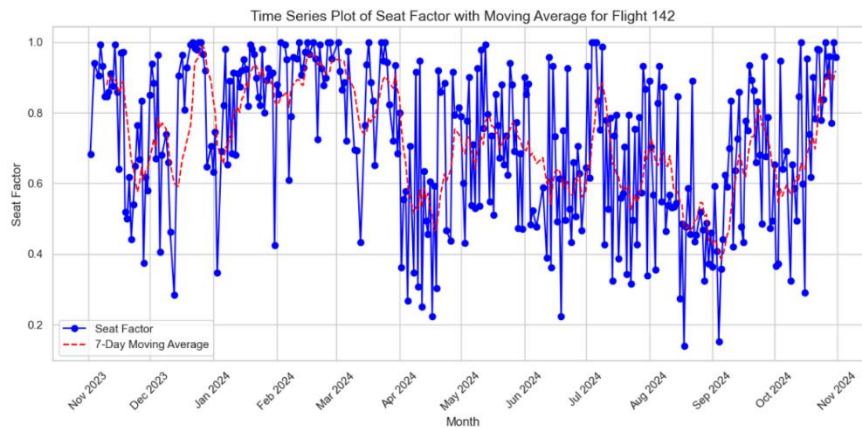
Average seat factor,

The highest average seat factor occurs from **November to February**, peaking in **February** at around 0.9.

This indicates strong demand during the winter months. Many travelers prefer visiting Sri Lanka during this time due to favorable weather

conditions.

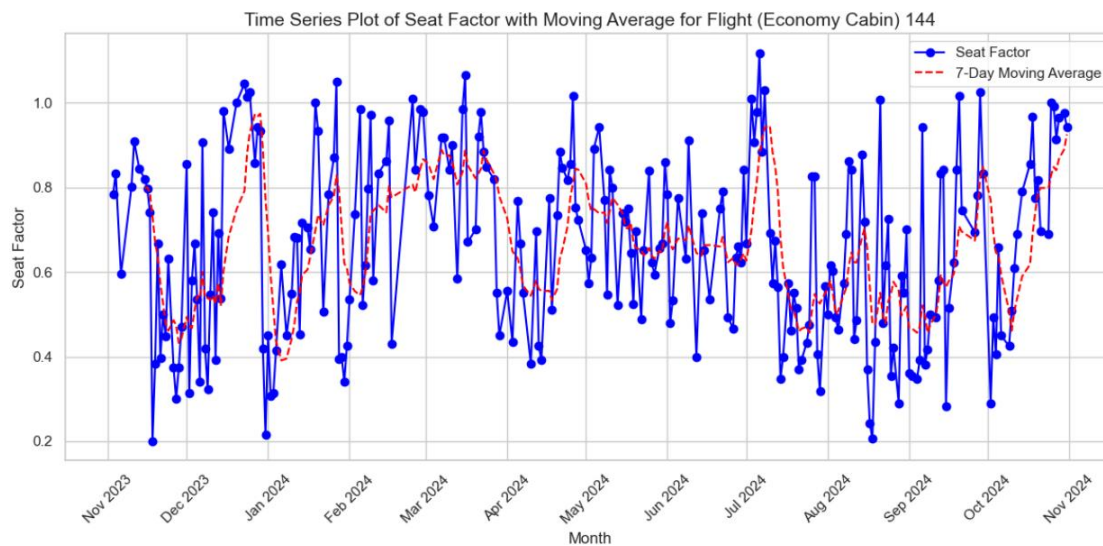
The lowest average seat factor is observed between **May and August**, with the lowest point occurring in **April and August**.



The lower demand during mid-year and summer months so fewer tourists travel during the hot and humid summer months, also Sri Lanka's monsoon season discourages travel, reduced business travel, and warmer

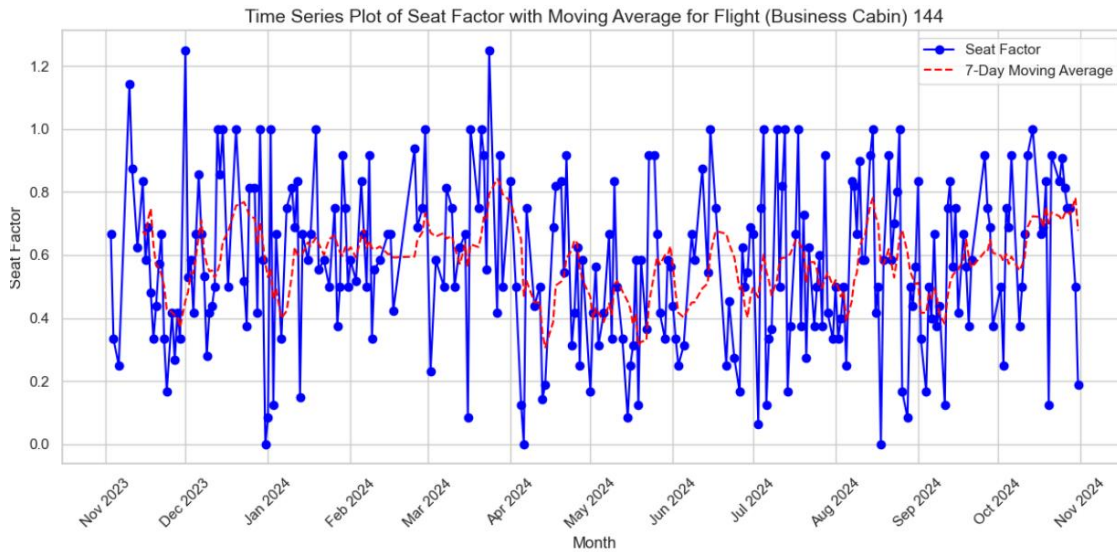
weather conditions.

Flight 144

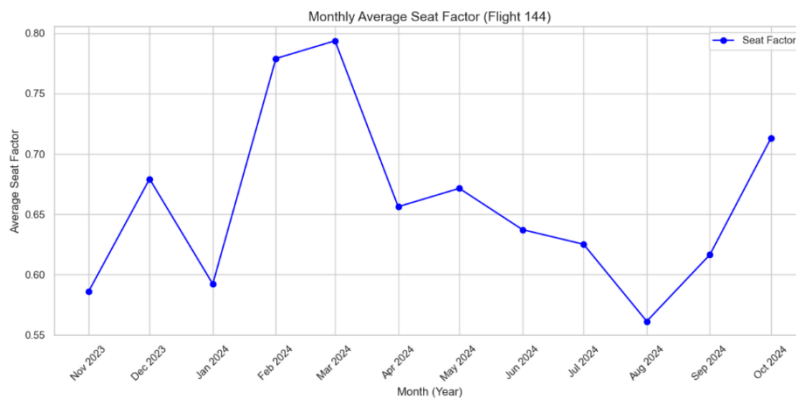


In the economy cabin,

- In the economy cabin, February to July months have approximately stable seat factors between 0.6 -0.9



- The average business cabin seat factor fluctuates between 0.4 -0.8
- The lowest seat factors are including in the January and April months. Likely due to post-holiday travel slowdowns in January and reduced business activity in April, possibly linked to the end of the fiscal year or school holidays.



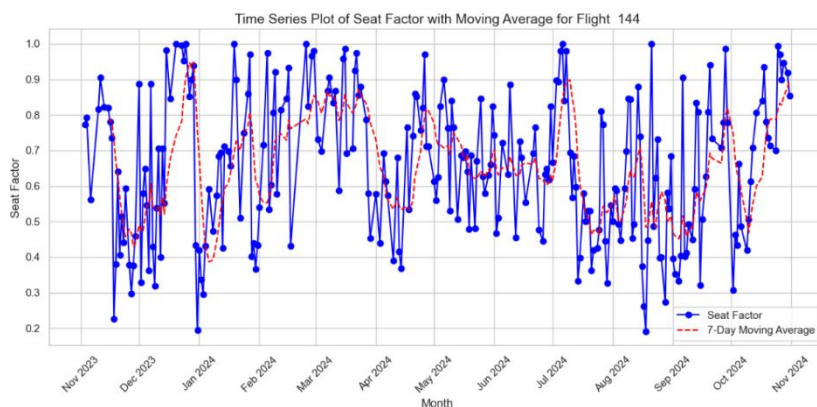
Average seat factor,

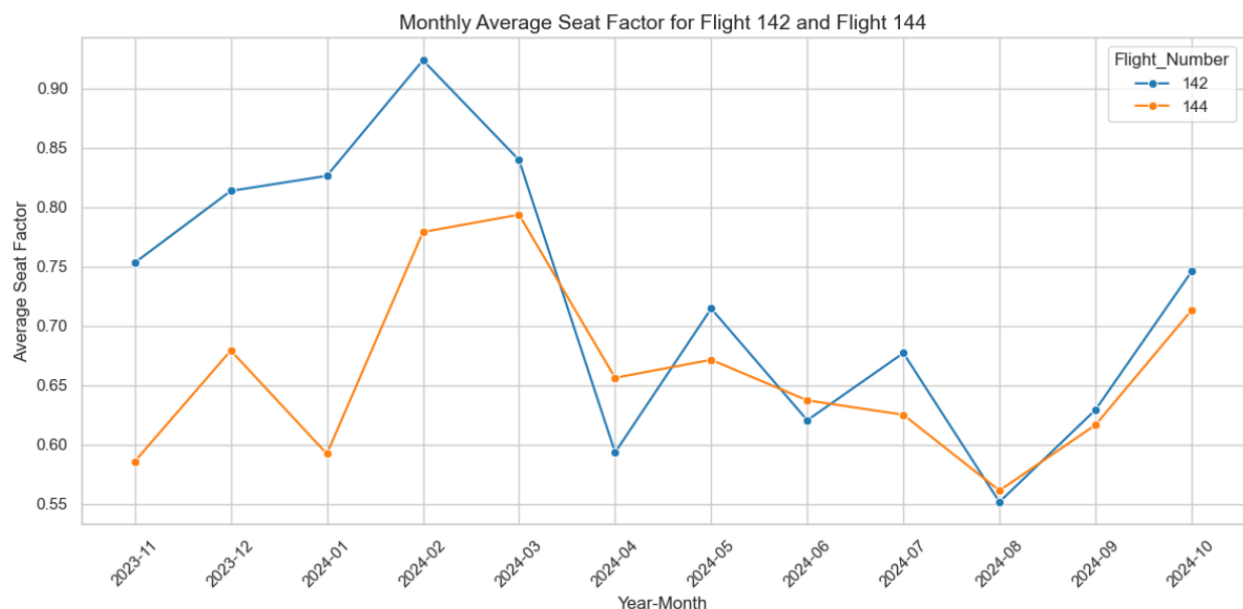
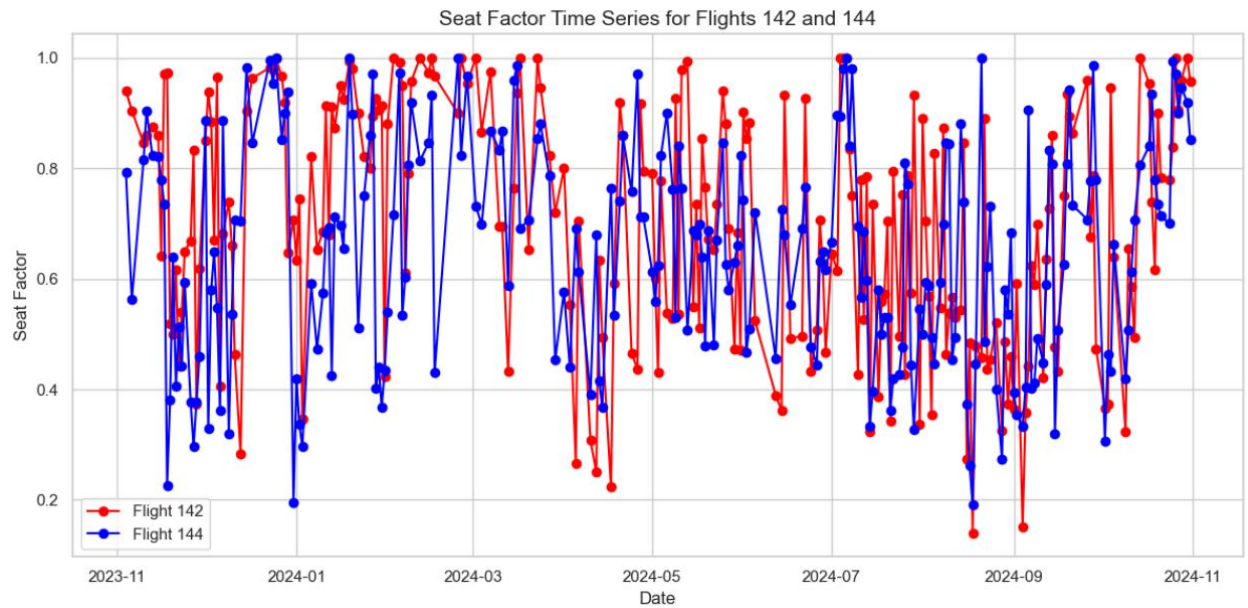
The highest average seat factor occurs from **February to March**, peaking in **March** at around 0.8.

This coinciding with the end of the financial year in India and Sri Lanka, business-related travel, and holiday tourism around festivals like Maha Shivaratri and Holi.

The lowest average seat factor is observed between **August**.

August marks off-peak travel due to fewer business trips, as it coincides with summer holidays and monsoon season, reducing overall travel demand between Mumbai and Sri Lanka.





High Seat Factor (February–March):

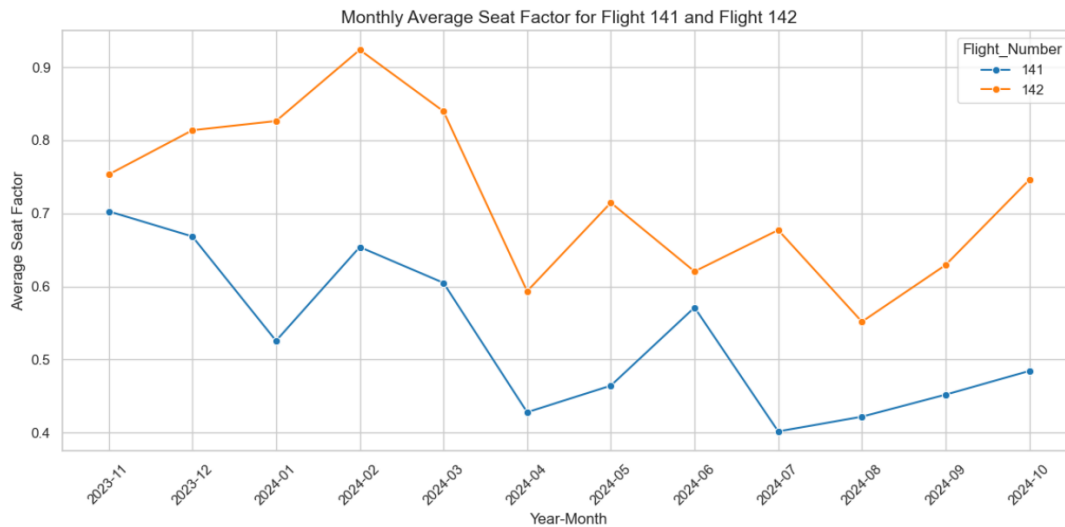
Driven by increased business travel due to the financial year-end in India and Sri Lanka, along with heightened leisure travel around festivals like Maha Shivaratri and Holi. Favorable weather also attracts tourists during this period.

Low Seat Factor (August):

Declines due to the off-peak travel season, marked by the monsoon in Sri Lanka, reduced business activity during summer holidays, and a lack of significant cultural or business events.

The average seat factors across all months follow similar patterns, and there is no significant difference between the early morning and night flights.

Compare the two flights of CMB- BOM and BOM - CMB



Flight 141 has a corresponding return flight, 142, operating every day. Throughout this period, the return flight (142) consistently has a higher average seat factor than flight 141.

Both flights have high-demand seat factors in February and October months.

In February,

- Holiday Travel: Increased demand during Chinese New Year and Valentine's Day.
- Winter School Breaks: Families traveling during mid-winter vacations.
- Cultural Events: Festivals and special events attract more travelers.

In October,

Seasonal Tourism:

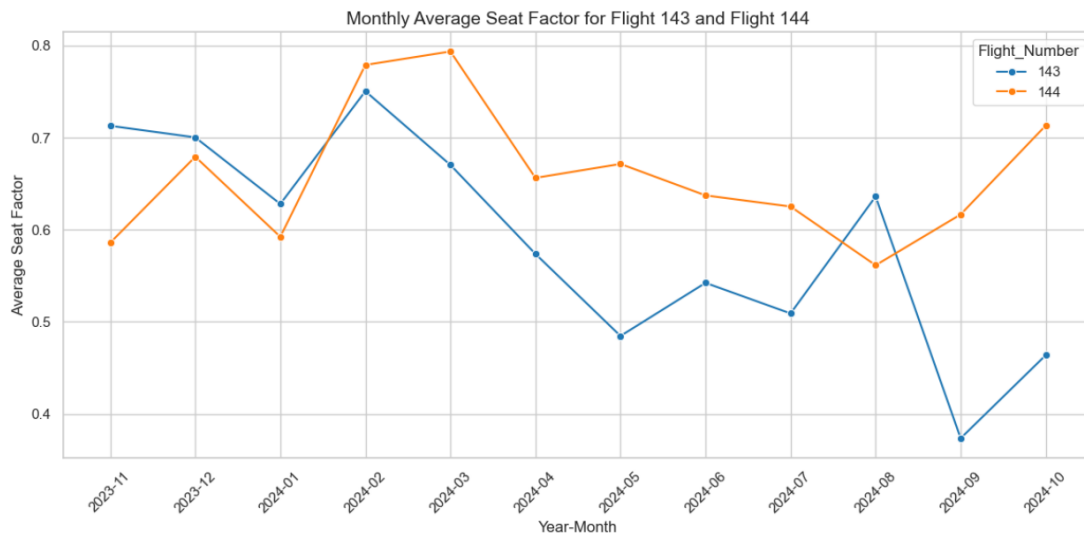
- Popular for **fall tourism**, especially in regions with scenic autumn landscapes.
- Increased travel before the busy holiday season in November and December.

Public Holidays:

- Events like **Golden Week in China** significantly raise travel demand.

Business Travel:

- Many companies hold **conferences** and **business events** post-summer, leading to higher seat factors.



Flight 143 has a corresponding return flight, 144, operating daily. The return flight (144) usually has a higher seat factor than flight 143.

➤ **High Demand Period (February)**

- **Holiday Travel:** Increased demand during Chinese New Year and Valentine's Day.
- **Winter School Breaks:** Families traveling during mid-winter vacations.
- **Tourism Peak:** Popular for winter tourism and holiday getaways.
- **Cultural Events:** Festivals and special events attract more travelers.

➤ In September, there is a noticeable difference in the seat factor.

End of Summer Holidays:

- **Back-to-school period:** Many families and students return from summer vacations, decreasing leisure travel demand from Colombo to Mumbai.