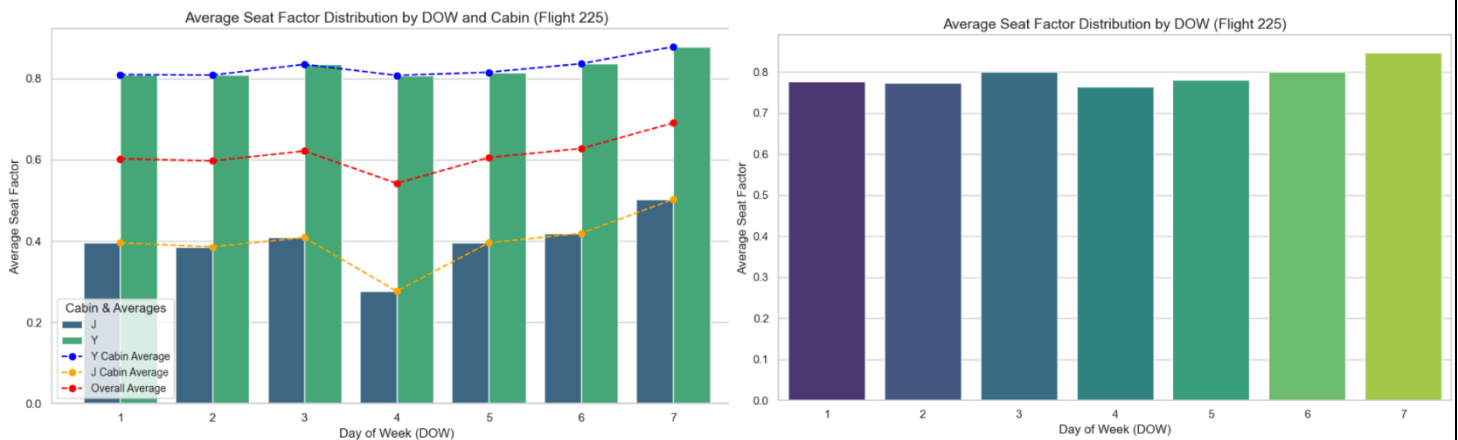


CMB Inventory Analysis of CMB-DXB(01-Nov-23 to 01-Nov-24)

- The flight numbers of the CMB – DXB – 225
 - All the days of the week (6.40 P.M in Colombo – 9.50 P.M in Dubai)
 - The duration of that flight is approximately 4.40 hours
- The flight numbers of the DXB- CMB – 226
 - All the days of the week (11.10 P.M in Colombo – 5.00 A.M in Dubai)
 - The duration of that flight is approximately 4.20 hours.
- 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 – DXB



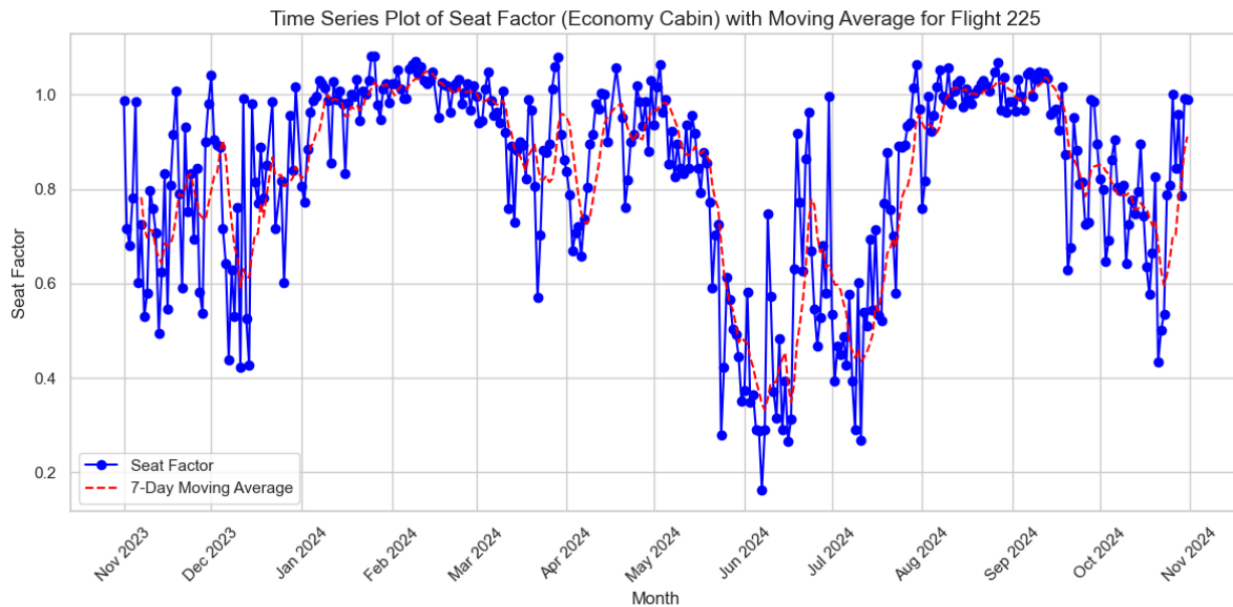
The seat factor of flight 225. Here, the highest economy class seat factor is included on the 7th day(Sunday) of the week, and that day has the highest business class seat factor.

The average seat factor of both the economy and the business classes is above 0.7. The highest average seat factor is also included on the 7th day(Sunday) of the week.

(Starting from January 1, 2022, Dubai's official working hours changed to 7:30 a.m. to 3:30 p.m., Monday to Thursday, and 7:30 a.m. to 12:00 p.m. on Fridays)

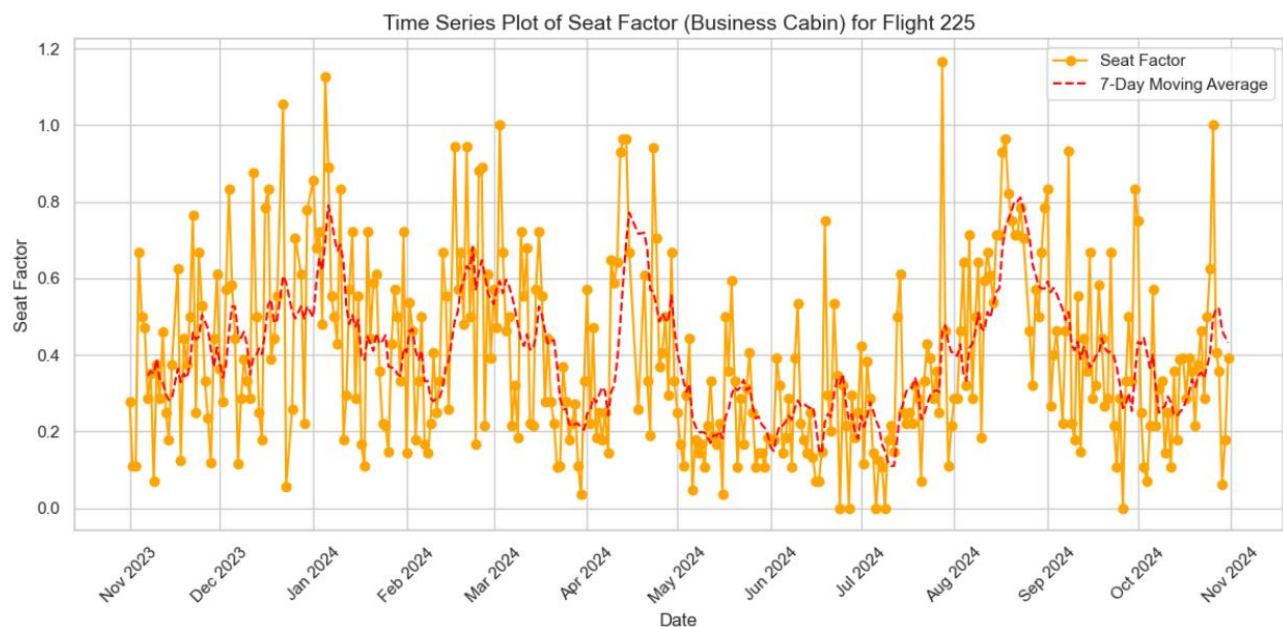
The high seat factor on the 7th day (Sunday) for Flight 225 can be attributed to several key factors:

1. **Weekly Travel Demand:** Many travelers, including workers and tourists, prefer returning to Dubai on Sundays to prepare for the workweek ahead.
2. **Convenient Flight Timing:** The 6:40 PM departure allows passengers to complete their day in Colombo and arrive in Dubai by night.



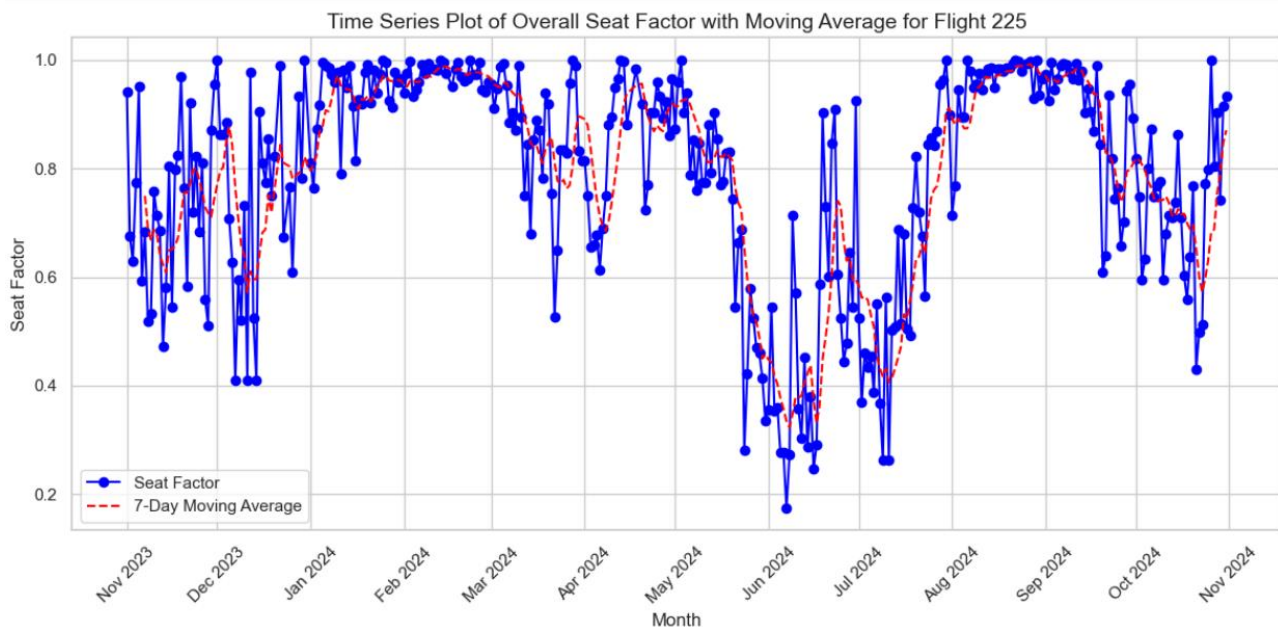
Low Demand (Mid-May to Mid-July): The demand for flights is lower due to off-peak travel, the monsoon season in Sri Lanka, and Ramadan, when travel takes a backseat to religious activities.

High Demand (January-March and August-September): Higher demand is driven by the peak holiday season, with people traveling for leisure or family visits, and Sri Lankan migrant workers returning to Dubai. Dubai's tourism events, like the Dubai Shopping Festival, also contribute to the increased demand.



Peak Demand in Mid-August: This period sees an uptick in business travel as corporate activities resume after the summer break. Dubai, a hub for business in the Middle East, attracts professionals attending conferences, meetings, and exhibitions.

Average seat factor



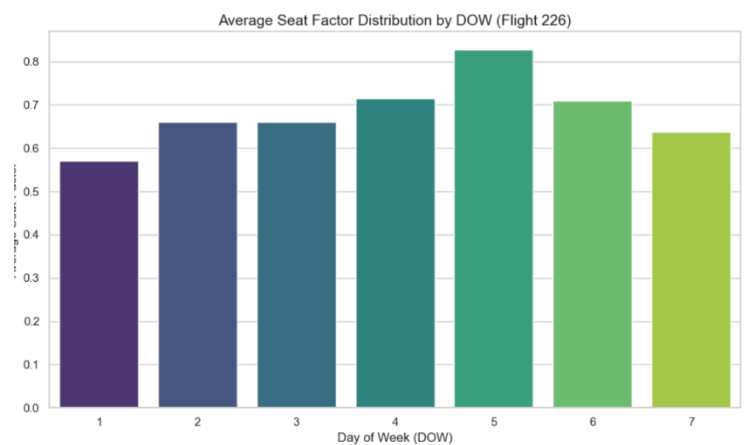
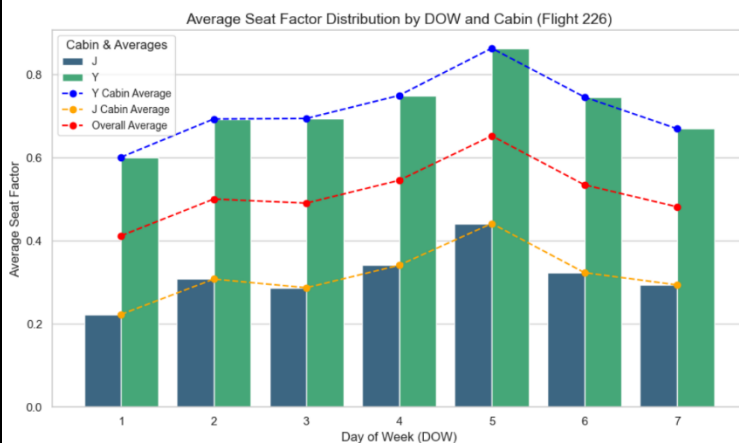
High demand (January to March and August to September)

- Due to holiday travel, the Dubai Shopping Festival, and the return of expatriates.

Low demand (mid-May to mid-July)

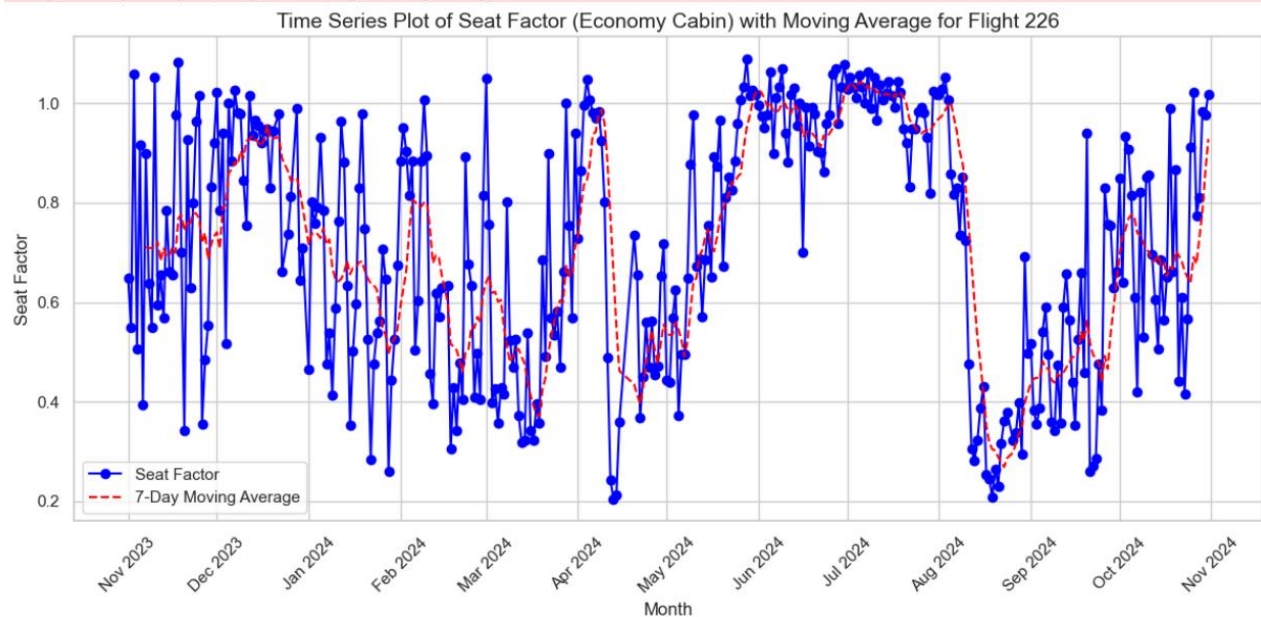
- Influenced by the monsoon season in Sri Lanka, Ramadan, and reduced business travel.

DXB-CMB



For Flight Number 226, the highest average seat factor is observed on the 5th day of the week, which is Friday. Both economy and business class seat factors are notably high on Fridays.

1. **Weekend Travel Demand:** Many passengers, including workers and tourists, prefer flying from Dubai to Colombo on Fridays to take advantage of the weekend.
2. **Convenient Flight Timing:** The flight schedule aligns with the end of the workweek, allowing travelers to finish their commitments in Dubai and reach Colombo in time for the weekend.



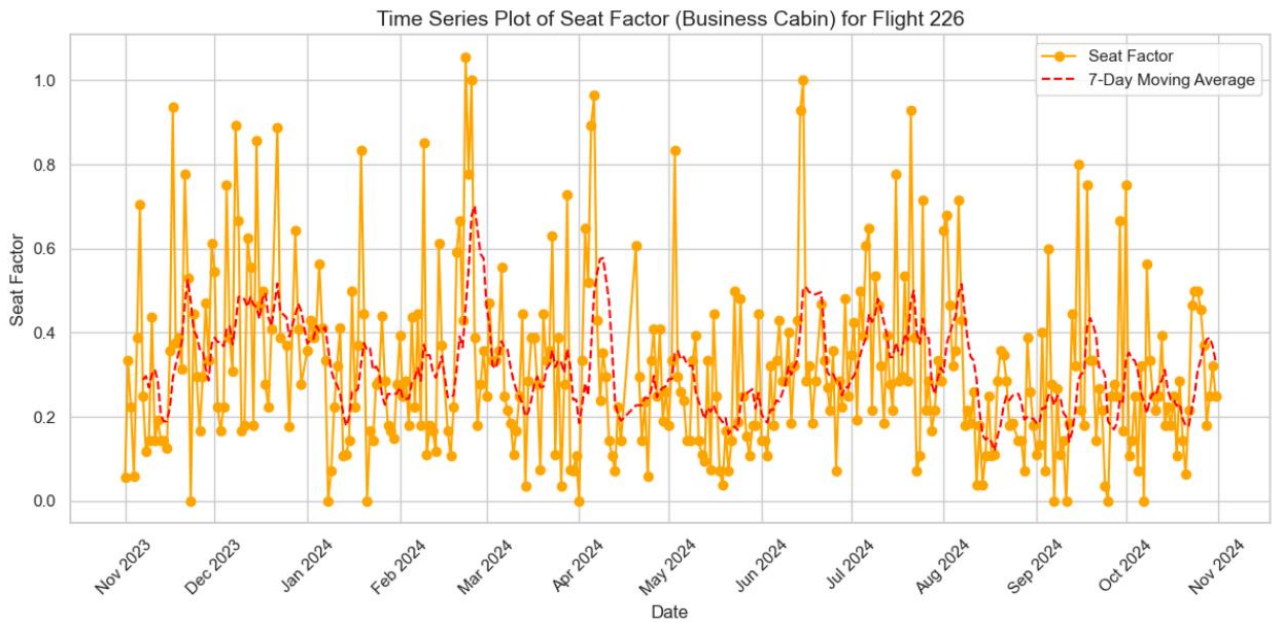
In economy class,

High demand (June to August)

- **Summer Holidays:** Many Sri Lankan expatriates and families travel back home during the summer vacation period.
- **Tourist Influx:** Increased leisure travel from Dubai to Sri Lanka, especially due to favorable weather conditions.

Low Demand Periods (January to March and Mid-August to September)

- **Post-Holiday Lull:** After the December holidays, travel demand drops in the early months due to fewer leisure trips.
- **Reduced Festive Activity:** Lack of major festivals or events reduces travel incentives during these periods.



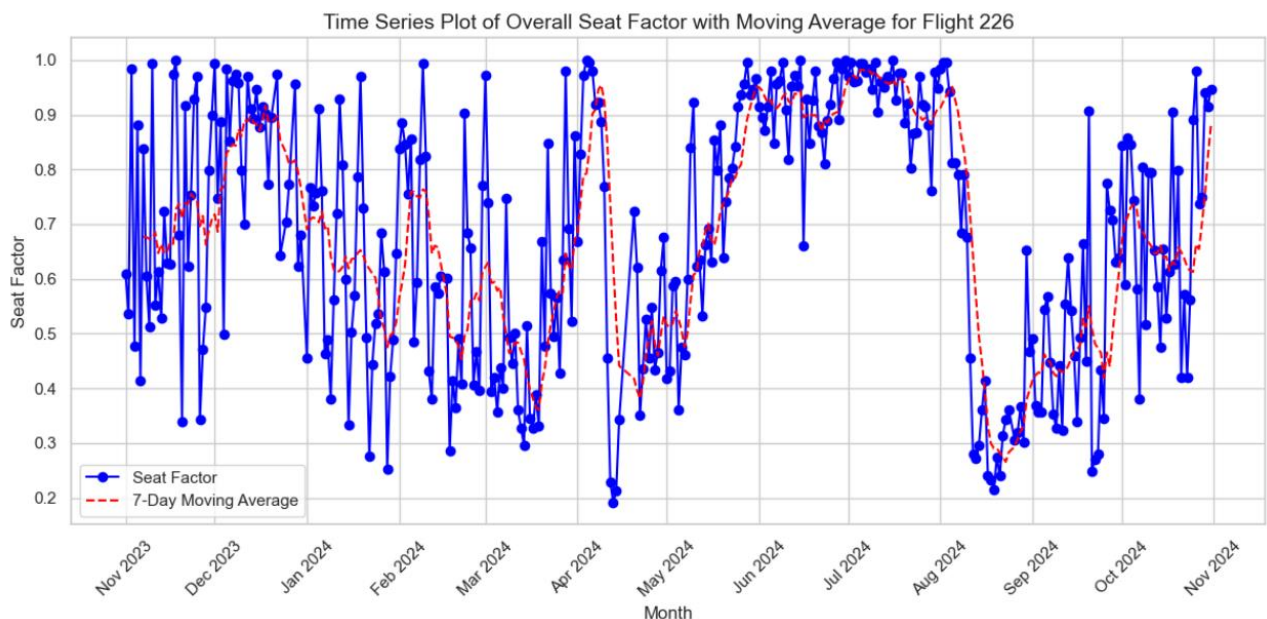
In business class,

High Demand Periods (End of February)

- **Return of Business Travelers:** End-of-month business trips often increase, as companies finalize deals or attend reviews.

Low Demand Periods (Generally Between 0.2 to 0.5 Seat Factor)

- **Seasonal Trends:** Business class sees consistently lower demand during most periods compared to economy class.
- **Cost Considerations:** Many companies reduce business travel expenses during non-critical months.
- **Ramadan Influence:** Corporate travel typically slows down during religious periods like Ramadan.



Average seat factor,

High Demand Periods (June to August):

- **Summer Holidays:** This is a peak travel season as many expatriates from Dubai return to Sri Lanka for vacation.
- **Cultural and Religious Events:** The Esala Perahera festival in Sri Lanka, occurring in July-August, attracts both locals and tourists.
- **Tourism Surge:** Favorable weather and increased leisure travel during mid-year contribute to higher seat factors.
-

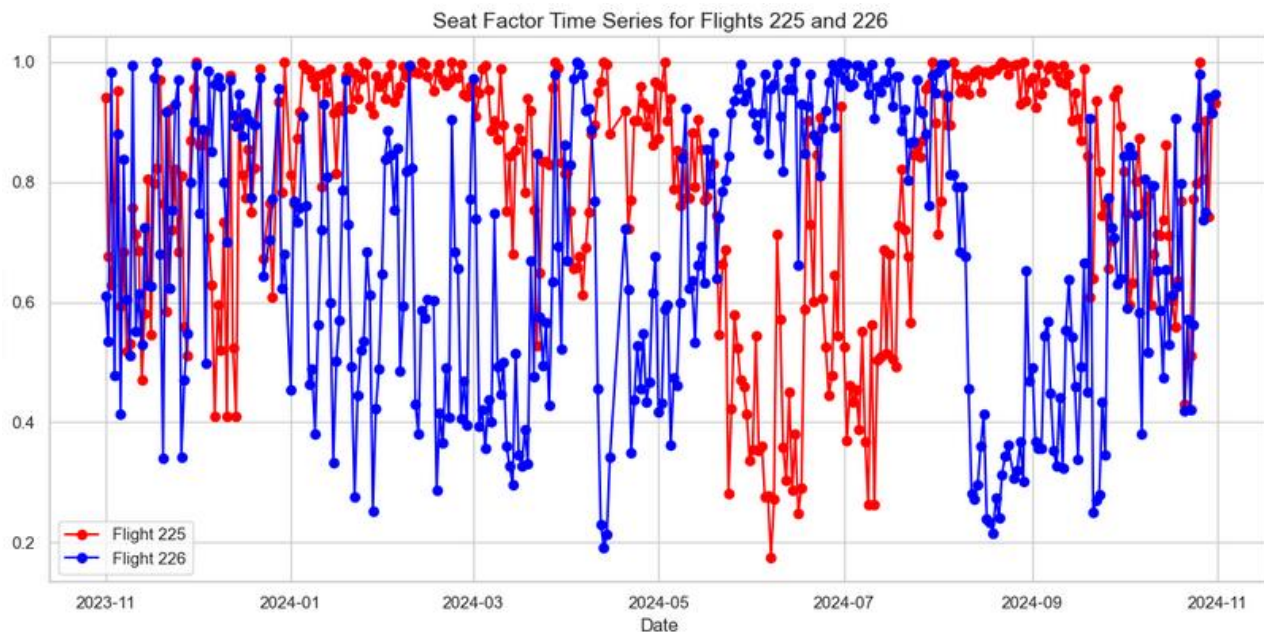
Low Demand Periods (January to March and September):

- **Post-Holiday Drop:** Following the December holiday season, travel demand typically decreases as families return from vacation.
- **Off-Peak Travel:** Fewer business and leisure trips occur in the early months of the year.
- **Post-Summer Lull:** After the peak summer travel, demand drops in September due to the end of school vacations and fewer festivals.

Key Insights:

- **Seasonal Influence:** Demand patterns are heavily influenced by holidays, cultural events, and school vacations.
- **Targeted Planning:** Airlines may benefit from strategic pricing and promotions during low-demand periods to maximize occupancy.
- **Business vs. Leisure Travel:** Business travel remains steady in certain months, while leisure travel significantly impacts high-demand periods.

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



Flight 225 (Colombo to Dubai):

- **High Demand:** January–March, August–September.
 - **Reasons:**
 - **January–March:** Many workers and tourists travel to Dubai after the holiday season to start the new year.
 - **August–September:** Return of expatriates after summer vacations and school holidays.
- **Low Demand:** Mid-May–Mid-July.
 - **Reasons:** Post-Ramadan travel decline and off-peak tourism season.

Return Flight 226 (Dubai to Colombo):

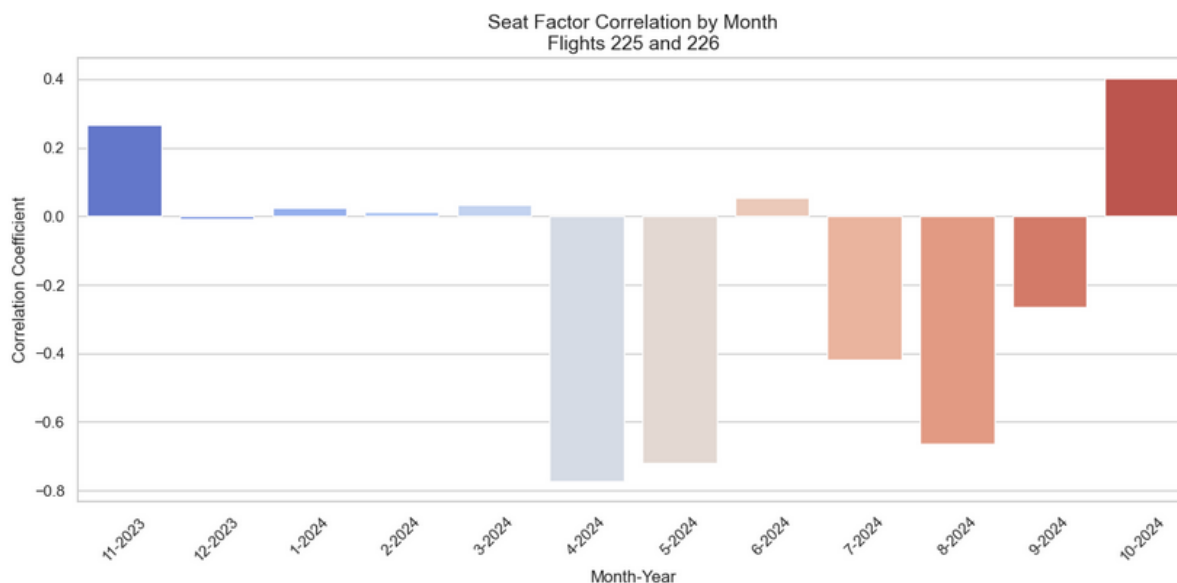
- **High Demand:** June–August.
 - **Reasons:** Many expatriates travel to Sri Lanka for summer vacations and school holidays.
- **Low Demand:** January–March, September.
 - **Reasons:** Post-holiday slowdown and reduced travel after summer vacations end.

Key Insights:

- **Seasonal Trends:** Different travel patterns for Colombo-based and Dubai-based travelers.

- **Strategic Focus:** Tailor promotions and pricing strategies for low-demand periods to optimize occupancy.

Correlation Analysis Between Flight 225 and Return Flight 226



The chart illustrates the monthly correlation coefficients between the seat factors of Flight 225 and the return Flight 226. A positive correlation indicates similar demand trends for both flights, while a negative correlation suggests inverse demand patterns.

Positive Correlation Periods:

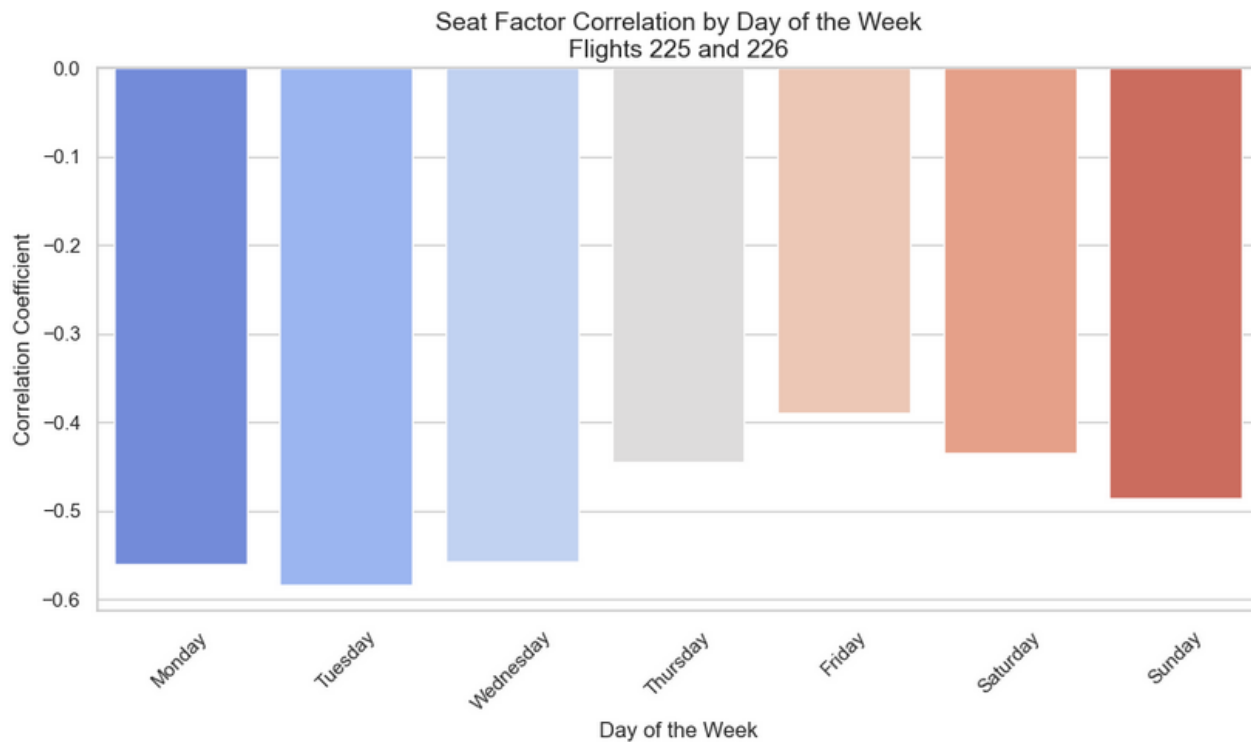
- **November 2023:** Moderate positive correlation (~ 0.2). Demand patterns align slightly during this period, possibly due to the pre-holiday travel rush.
- **October 2024:** Strong positive correlation (~ 0.4). Both flights experience similar demand trends, potentially due to increased travel linked to holiday seasons or vacations.

Near-Zero Correlation:

- **December 2023 to March 2024:** Minimal correlation. The demand patterns for outbound and return flights differ, indicating independent travel behaviors during this period.
- **June 2024:** Close to zero, suggesting balanced but distinct demand trends.

Negative Correlation Periods:

- **April- May 2024:** Strong negative correlation (~ -0.7). When demand is high for one flight, it tends to be low for the other, likely due to travelers returning or departing at different times after the peak tourist season.
- **July–September 2024:** Consistently negative correlation. Travelers from Colombo to Dubai and vice versa follow opposing patterns, such as summer vacation returns or post-holiday slowdowns.



Negative Correlation Across All Days:

The seat factors for Flights 225 and 226 show an inverse relationship throughout the week.

- **Peak Difference (Tuesday):** Highest negative correlation indicates significant variance in demand patterns.
- **Reduced Difference (Friday):** Slightly lower negative correlation, suggesting a more balanced seat factor between outbound and return flights.