

Intent of the Plot:

Intent of the Plot: The combined box plots show the distribution and variation of four flight pricing factors: Base Fare, Tax & Surcharge, Total Fare, and Days Before Departure. The goal is to understand how fares and booking times vary, how spread out the data is, and if there are outliers or skewness.

Short Description:

The first three plots (Base Fare, Tax & Surcharge, and Total Fare) represent amounts in BDT, while the fourth (Days Before Departure) shows the number of days.

Each plot displays the median (middle line), the interquartile range (the box), and the whiskers for normal data points. Small circles show outliers.

Interpretation:

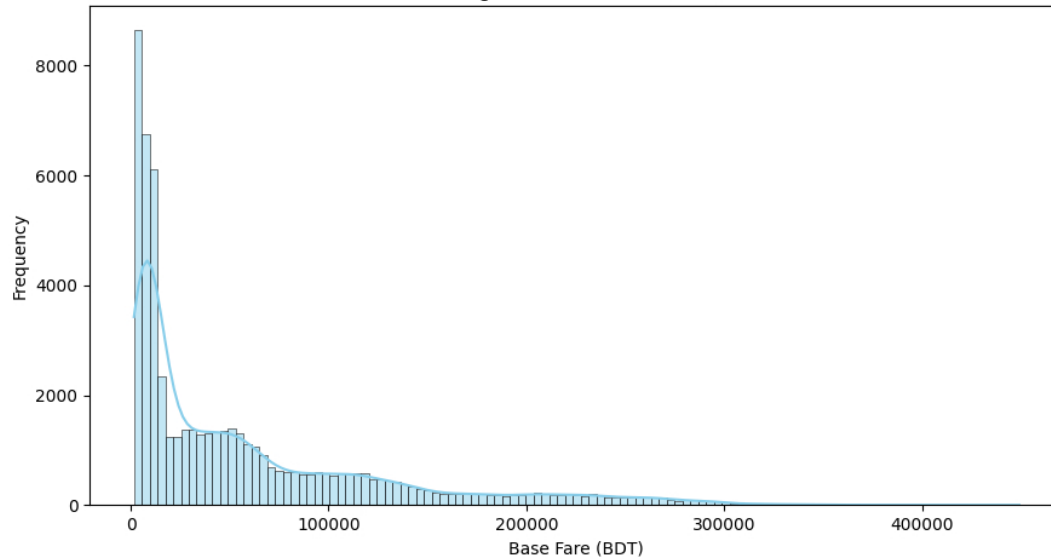
Interpretation:

Base Fare, Tax & Surcharge, and Total Fare have wide variation and many expensive outliers.

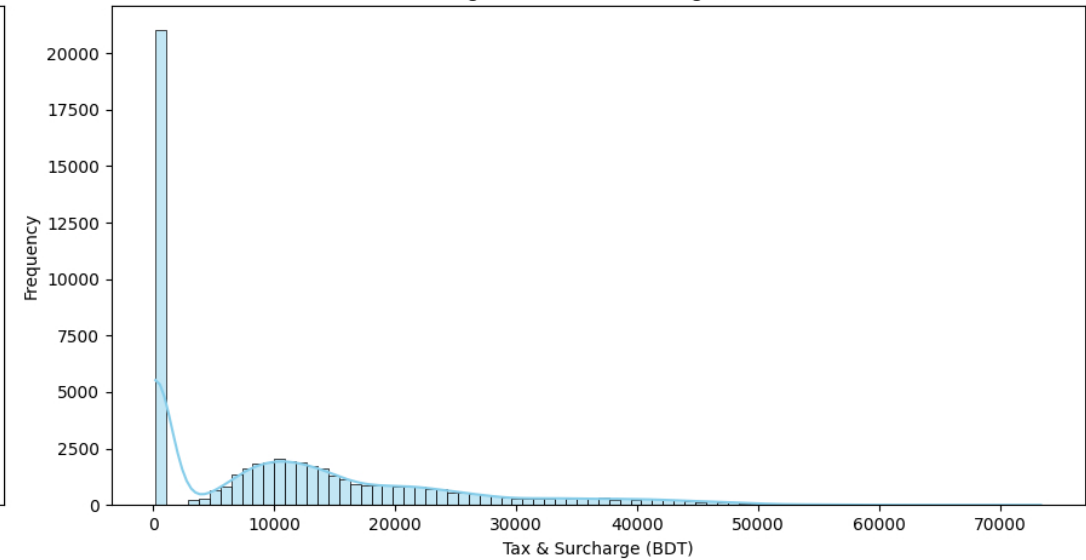
Total Fare follows a similar pattern to Base Fare since it's directly related.

Days Before Departure is more balanced without extreme outliers

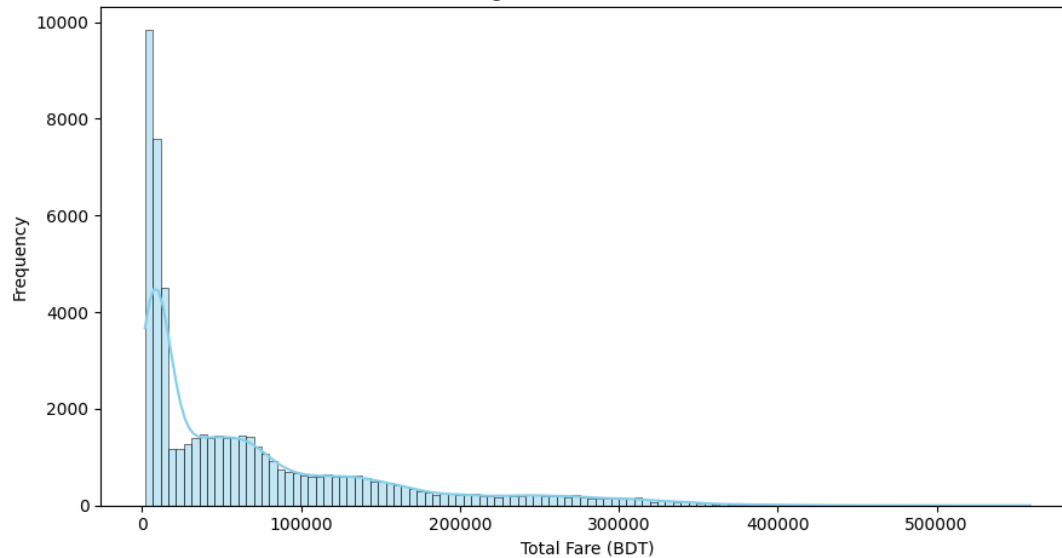
Histogram of Base Fare (BDT)



Histogram of Tax & Surcharge (BDT)



Histogram of Total Fare (BDT)

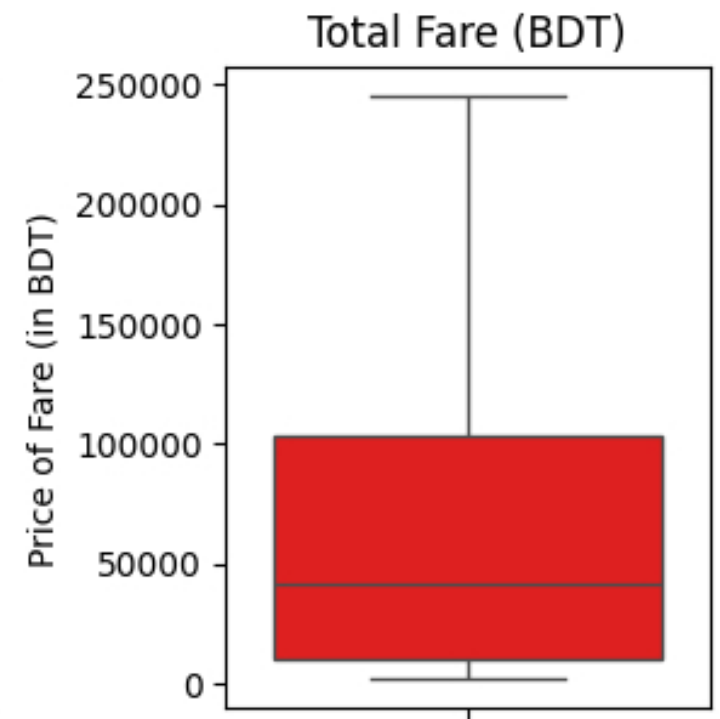
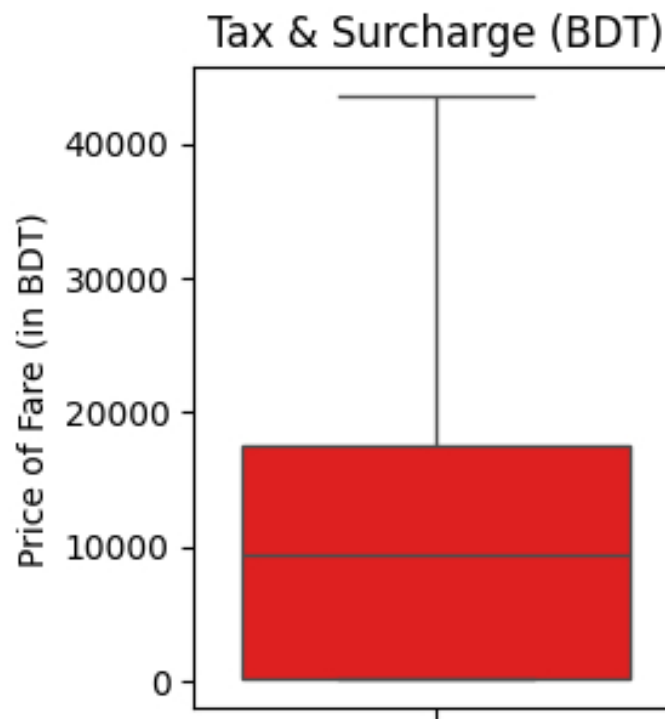
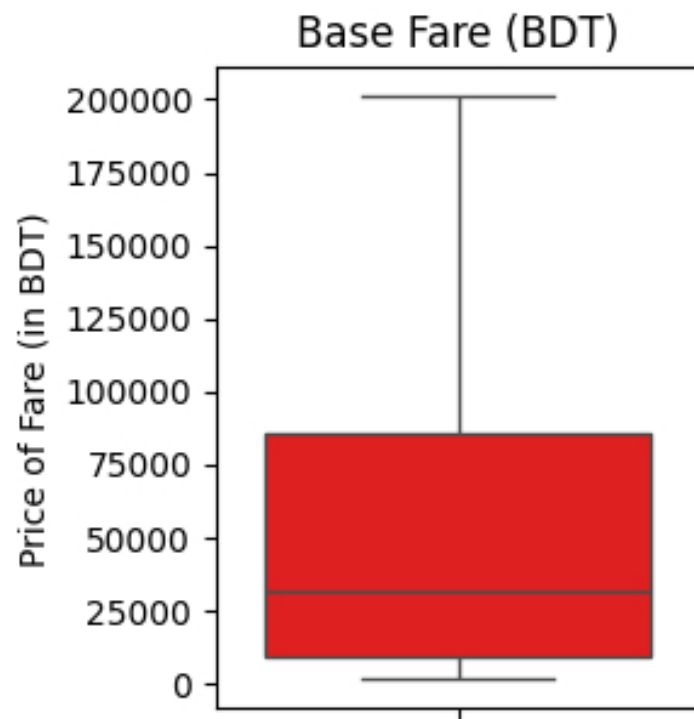


The histograms show the spread and shape of Base Fare, Tax & Surcharge, and Total Fare.

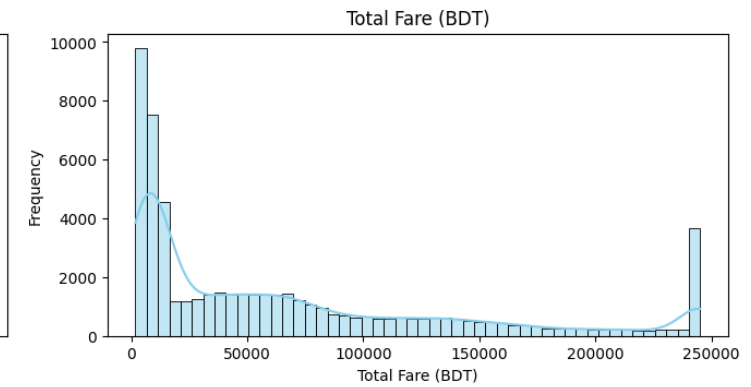
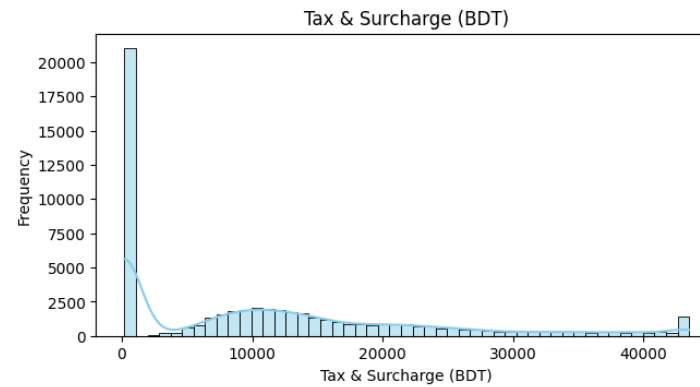
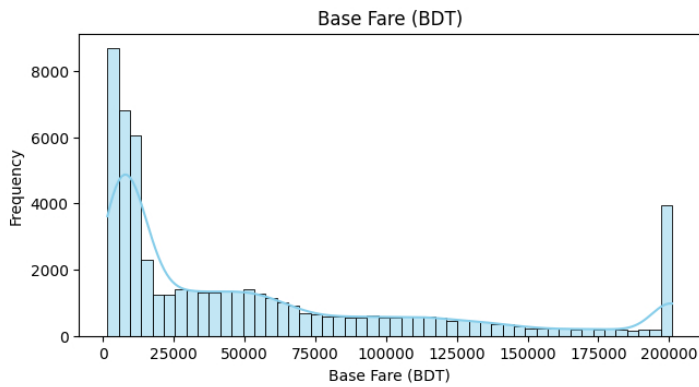
All three distributions are highly right-skewed — most fares are low, but a few are extremely high.

A smooth curve (KDE) is added to highlight the distribution shape.

Most Total Fares are below 100,000 BDT. The Base Fare and Tax & Surcharge are skewed similarly, causing the Total Fare to also be skewed.



Base Fare (BDT):
Middle 50% (IQR): 8,856.32 BDT to 85,722.93 BDT.
Median: ~47,000 BDT.
Whiskers: 0 BDT to 175,000 BDT.
No outliers (removed).
Tax & Surcharge (BDT):
Middle 50% (IQR): 200.0 BDT to 17,513.05 BDT.
Median: ~8,000 BDT.
Whiskers: 0 BDT to 35,000 BDT.
No outliers (removed).
Total Fare (BDT):
Middle 50% (IQR): 9,602.70 BDT to 103,800.91 BDT.
Median: ~55,000 BDT.
Whiskers: 0 BDT to 210,000 BDT.
No outliers (removed).



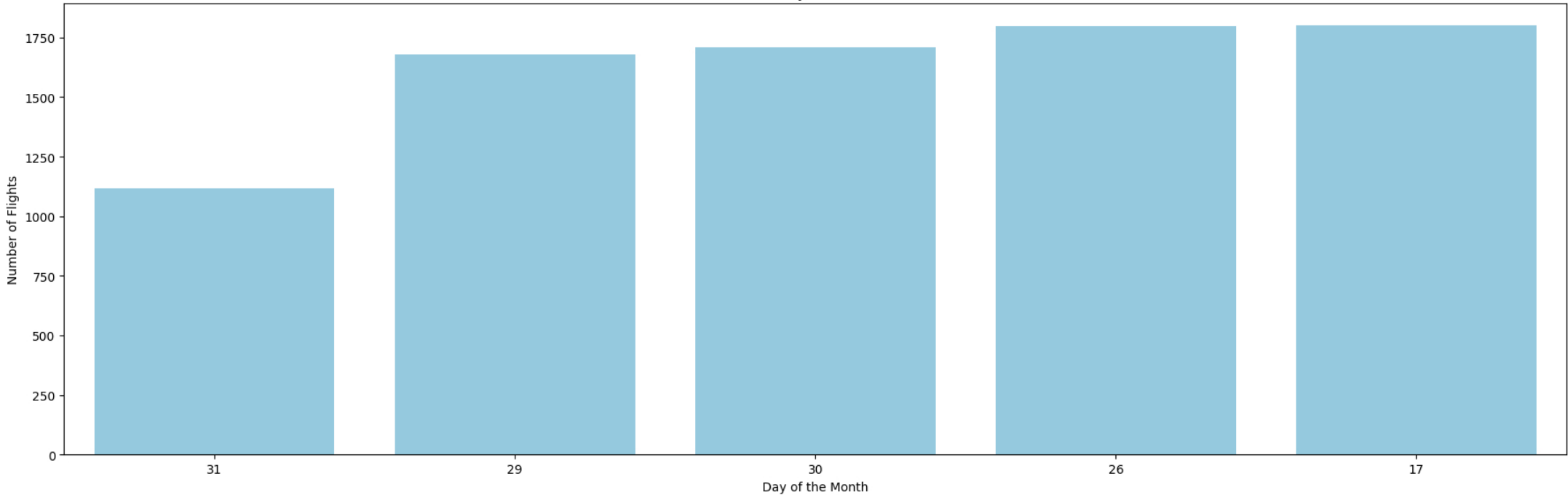
Base Fare (BDT): The distribution is heavily skewed to the right, meaning most base fares are low. There is a large peak in frequency near 0 BDT, with frequencies decreasing significantly for higher fares. The data spreads out towards higher values, visible up to around 200,000 BDT.

Tax & Surcharge (BDT): This distribution is extremely skewed to the right. The vast majority of tax and surcharge values are concentrated in a very tall peak right at or near 0 BDT. Frequencies drop off very steeply for any higher amounts shown, up to around 40,000 BDT.

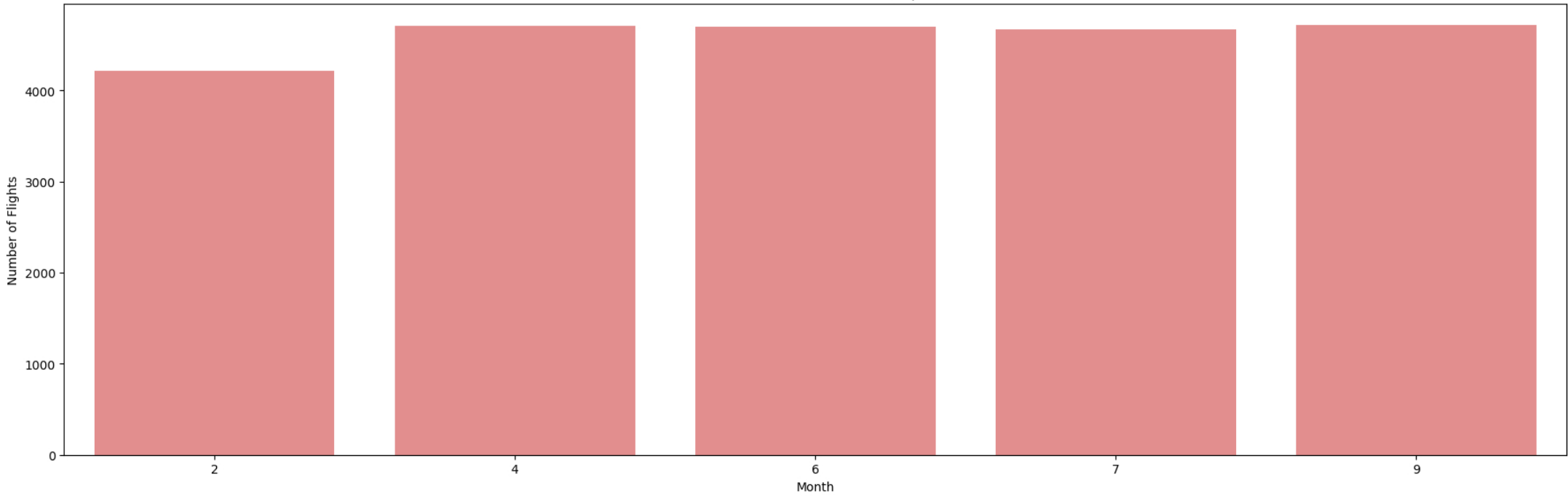
Total Fare (BDT): The distribution is also skewed to the right, but less extremely than Tax & Surcharge. There is a prominent peak in frequency near 0 BDT, and frequencies decrease as the total fare increases. The data extends up to around 250,000 BDT, showing that while lower fares are most common, higher total fares do occur with decreasing frequency.

The charts identify the top 5 busiest days of the month and the top 5 busiest months of the year by the number of flights.
For Busiest Days of the Month, days 17, 26, 29, 30, and 31 are shown as the busiest.
For Busiest Months of the Year, months 2 (February), 4 (April), 6 (June), 7 (July), and 9 (September) are highlighted as having the highest flight activity among the top months.

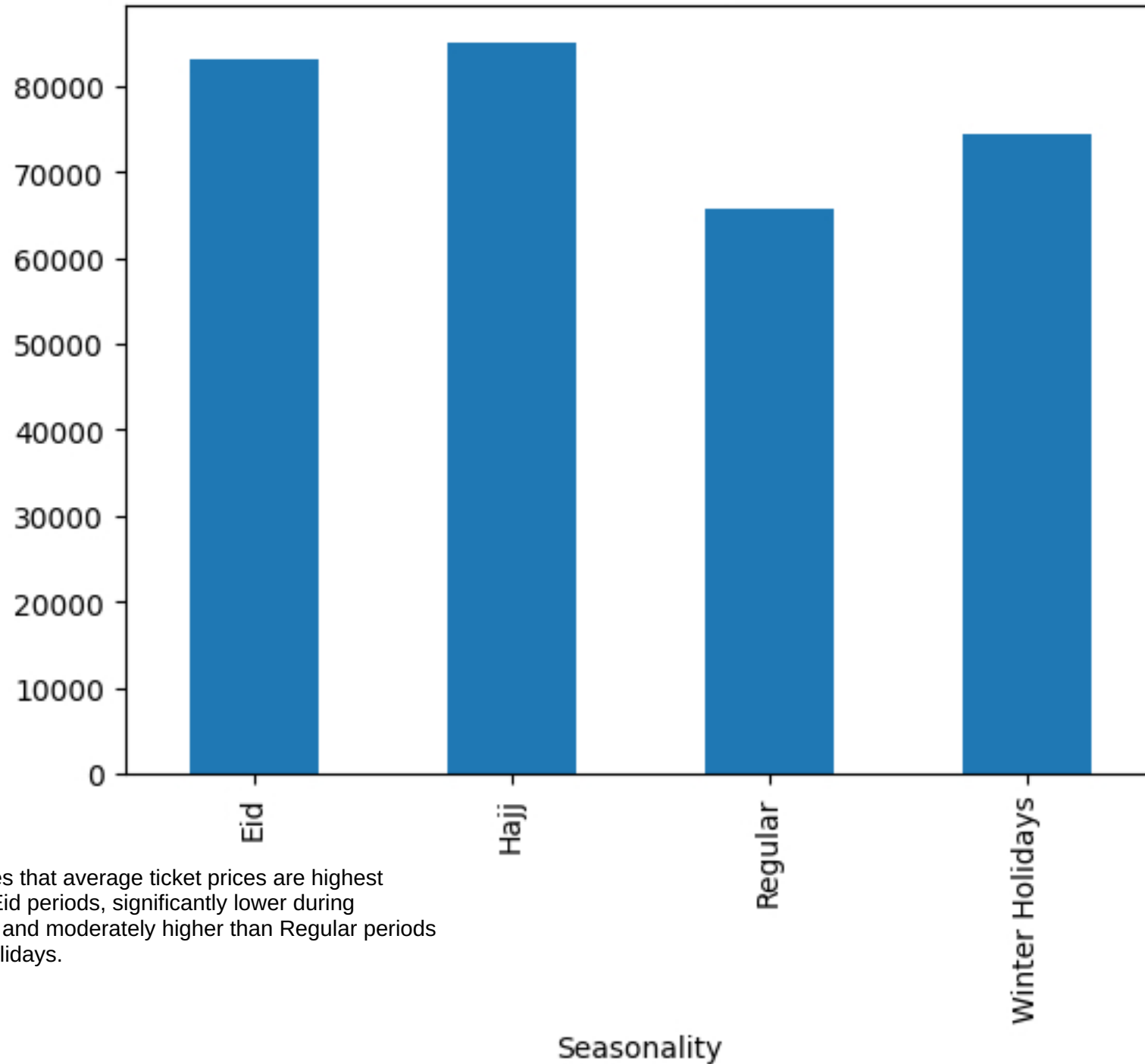
Busiest Days of the Month



Busiest Months of the Year (Top 5)



Average Ticket Prices by Seasonality



the chart indicates that average ticket prices are highest during Hajj and Eid periods, significantly lower during Regular periods, and moderately higher than Regular periods during Winter Holidays.