

INTER QUARTILE RANGE

Five summary of Day and Night class

	Minimum	Q1	Median(Q2)	Q3	Maximum(Q4)
Day	32	56	74.5	82.5	99
Night	25.5	78	81	89	98

DAY

$$\text{IQR} = \text{Q3} - \text{Q1}$$

$$= 82.5 - 56$$

$$= 26.5$$

Lesser outlier

$$\text{Q1} - 1.5 * \text{IQR}$$

$$56 - 1.5 * 26.5 = 16.25$$

Greater outlier

$$\text{Q3} + 1.5 * \text{IQR}$$

$$82.5 + 1.5 * 26.5 = 122.25$$

In our eg no day class is less than 16.25. Moreover no day class is greater than 122.25. Therefore no outlier in our dataset.

NIGHT

$$\begin{aligned}\text{IQR} &= Q3 - Q1 \\ &= 89 - 78 \\ &= 11\end{aligned}$$

Lesser outlier

$$\begin{aligned}Q1 - 1.5 * \text{IQR} \\ 78 - 1.5 * 11 &= 61.5\end{aligned}$$

Greater outlier

$$\begin{aligned}Q3 + 1.5 * \text{IQR} \\ 89 + 1.5 * 11 &= 105.5\end{aligned}$$

In our eg night class 25.5 is less than 61.5. Moreover no day class is greater than 105.5. Therefore 25.5 is outlier in our dataset.