

IQR Rule:

Outlier Detection is balance between sensitivity and stringency, aiming to identify outliers that are meaningfully different from rest of the data without being overly sensitive.

To detect outliers because it most closely follows Gaussian distribution. As result the method dictates that any data point that's 1.5 points below the lower bound quartile or above the upper bound quartile is an outlier.

Example:

Compare the 2 Interquartile ranges

Any outliers in range

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

Day IQR $82.5 - 56 = 26.5$

Lesser Range $Q1 - (1.5)(IQR) \rightarrow 56 - (1.5)(26.5) = 16.25$

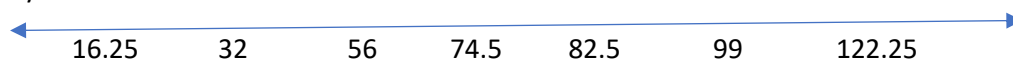
Greater range $Q3 + (1.5)(IQR) \rightarrow 82.5 + (1.5)(26.5) = 122.25$

Night IQR $89 - 78 = 11$

Lesser Range $Q1 - (1.5)(IQR) \rightarrow 78 - (1.5)(11) = 61.5$

Greater range $Q3 + (1.5)(IQR) \rightarrow 89 + (1.5)(11) = 105.5$

Day:



As per the diagram, Outlier is not present.

Night:



As per the diagram, Lesser Outlier is present.