Why “1.5” in IQR Method of Outlier Detection?

- Gaussian Distribution is used calculate the IQR decision range in terms of σ.

1. Taking scale = 1:

   Q1 - 1 * IQR using this formula.
   We get vaule 2.025 , this makes the decision range too exclusive, means this results in too much outliers.

2. Taking scale = 2:

   Q1 - 2 * IQR using this formula.
   We get vaule 3.375, his makes the decision range too inclusive, means this results in too few outliers.

3. Taking scale = 1.5:

   Q1 – 1.5 * IQR using this formula.
   We get vaule 2.7 , this makes the decision rule closest to what Gaussian Distribution considers for outlier detection.

Therefore, 1.5 is used in IQR Method outlier detection.