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DSC520 – T302 Statistics for Data Science

Week 3 Assignment

4. Answer the following questions based on the Histogram produced:

- Based on what you see in this histogram, is the data distribution unimodal?

Histogram is unimodal at 85% - 90%.

- Is it approximately symmetrical?

Histogram isn't approximately symmetrical.

- Is it approximately bell-shaped?

Histogram isn't bell-shaped.

- Is it approximately normal?

Histogram isn't normal.

- If not normal, is the distribution skewed? If so, in which direction?

Histogram is moderately skewed left.

- A normal distribution can't accurately be used as a model because the data is skewed moderately.

- Answer the questions based on the Probability Plot:

- The distribution doesn't look normal because if you draw the line down the center, both sides are different.
- The skewness is negative 1.7, which shows the distortion. A normal bell-shaped curve has 0 for the skewness. The kurtosis for the graph is 7.5, where the normal

distribution has a value of 3. The Jarque-Bera score is 178, far from the normal distribution target of 0.