Histogram Visualization and Statistical Analysis Documentation

This Python script utilizes the NumPy and Matplotlib libraries to create a histogram of a given dataset representing the frequency of time intervals. The script also calculates and displays the standard deviation of the dataset and includes dashed lines on the histogram to highlight key statistical points.

1. Dataset

- The dataset named **frequency** represents the frequency of time intervals.
- It contains a list of integer values representing the delivery times.

2. Standard Deviation Calculation

- The script uses NumPy (**np**) to calculate the standard deviation of the dataset.
- The standard deviation (**StandardDeviation**) is calculated using **np.std()**.

3. Histogram Plotting

- Matplotlib's **plt.hist()** function is employed to create a histogram of the dataset.
- Parameters such as the number of bins, transparency (**alpha**), color, and edge color are specified.

4. Dashed Lines

- Dashed lines are added to the plot to highlight key statistical values:
  - A red dashed line indicates the maximum frequency.
  - A blue dashed line indicates the average frequency.
  - A green dashed line indicates the minimum frequency.

5. Visualization

- The script includes labels, a title, and legends for better interpretation of the visualization.
- The final plot is displayed using **plt.show()**.

Additional Notes

- The script is concise and provides a quick overview of the distribution of the given time intervals.
- Users can easily adapt the code for different datasets by modifying the frequency list.
- The visualization aids in understanding the variability and statistical properties of the dataset.