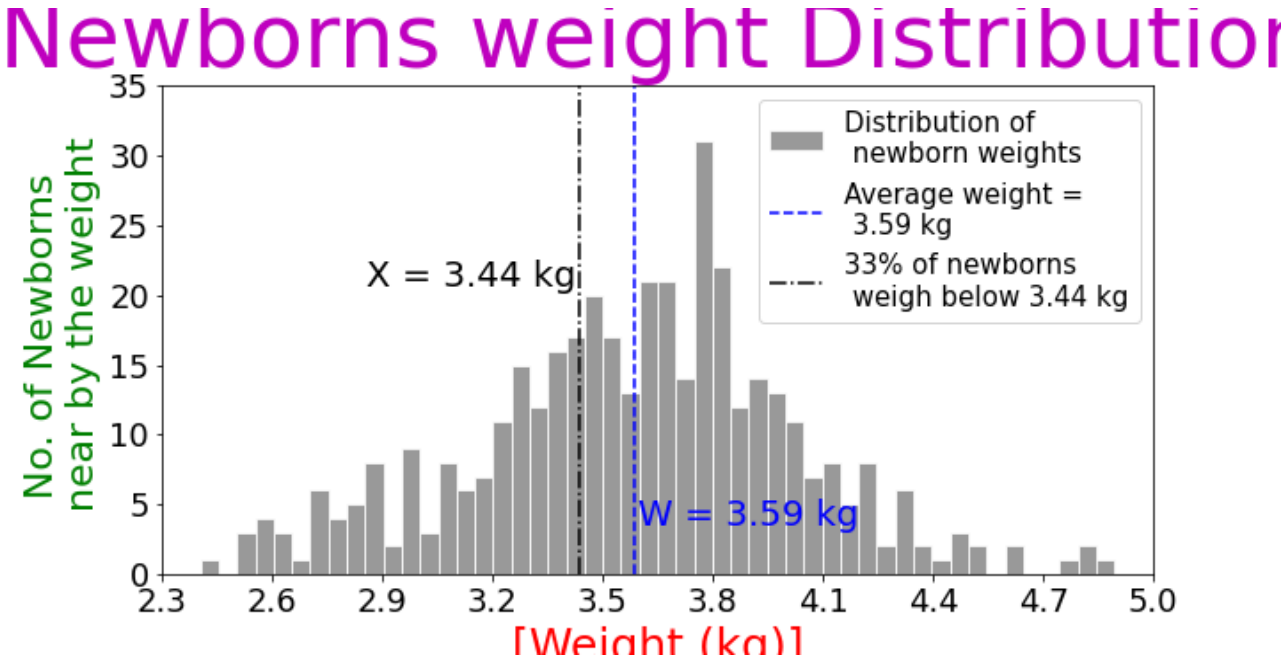
- *REPORT OF THE NEWBORNS WIEGHT DISTRIBUTION*



Here, We are given a data set in the csv file, which contains 400 values with different numbers in single column. This number represents the weight of newborns of the certain part of Europe which is observed over definite period of time. The weight of newborns is given in the term of kilograms.

In order to represent the weight of newborns we plot a histogram with python code, where we are using numpy, csv and matplotlib tools to convert the data into graph.

In the graph X-axis represent the newborn weights and Y-axis shows approximately number of newborns nearby the weights. Additionally, the mean weight can be used to determine the center of the distribution so we find the mean value of our graph using this formula $W = (1/n)*\text{sum}(a_i)$.Here a_i is the weight of of ith newborn in data for our data n=400. In the code provided, the numpy library is used to calculate the mean weight using the np.mean() function.

The value of the mean weight is printed to the console, and it is approximately equal to 3.58573 kg.The mean value is also represented with blue line

The value of X is calculated using the np.percentile() function with a percentile value of 33. This function finds the value below which a certain percentage of the data falls. In this case, we want to find the weight value X such that 33% of the newborns have a weight below X. The formula for calculating X is:

X = np.percentile(data, 33)

Where data is the list of newborn weights. The value of X is printed, and it is approximately equal to 3.43603 kg. In the given graph we can check it out that black line (-.) line represents the value of X and below distribution shows values below 33%

Overall, the code provided reads in data on the weights of newborns and provides summary statistics and a visualization of the distribution. The resulting histogram and summary statistics suggest that the distribution of newborn weights is approximately normal with a mean weight of approximately 3.59 kg.