Coding assignment

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The dataset is organised as a set of numerical numbers, each of which represents the yearly pay of a certain person.

Distribution:

The distribution that is given is unimodal, with only one peak. With a longer tail on the right side, the distribution is asymmetrical.

$$f(x;\mu,\sigma) = \frac{1}{\sigma\sqrt{2\pi}} e^{-1/2\left(\frac{x-\mu}{\sigma}\right)^2}$$

Mean:

Summing the product of each pay value and the associated probability density yields the mean yearly wage. An approximative estimate of the average yearly pay in the European nation is given by the mean figure. We obtained a mean value of 32023.35625.

$$\frac{mean = \sum_{i=1}^{n} arr[i]}{n}$$

X calculation :

The x value was estimated to be around 22765.71. This implies that 33% of the population makes more than $22765.71. The computation was performed using the NumPy library in Python. The subsequent formula

X = percentile (data, 33)