Experiment 5

Report

1. What is the mean and variance of vector 'x' (vector of sample means). Fill the following table:

Step	Mean of 'x'	Variance of 'x'	Theoretical Reason
1			
2			
3			

2. Fill the following table by identifying the lowest 'number of samples' (nsamples) required for mean distribution to be Gaussian distribution in step 5.

Step	Lowest nsamples	Reason
1		
2		
3		
4		

3. Explain how histogram, skewness and kurtosis are used to identify Gaussian nature of a variable.

4. In step 8, why are all variables tending to Gaussian? Explain clearly.

5. How are the findings of this experiment useful for machine learning in practice?