**evision Questions:**

1. What is PDF?

PDF- Probability Density Function

1. What is CDF?

Cumulative Distribution Function

1. Explain about 1-std-dev, 2-std-dev, 3-std-dev range?

The PDF always follows the 68-95-99.7% rule. 1-std-dev range – 68% 2-std-dev range – 95% 3-std-dev range – 99.7%

1. What is Symmetric distribution, Skewness and Kurtosis

Symmetric distribution: Which is the normal distribution which follows the 68-95-99.7% rule.

Skewness: How the actual distribution is varied when compared to the Normal/Symmetric distribution.

1. Positive/Right Skew Distribution 2. Negative/Left Skew Distribution

Kurtosis: Which tells the Peak of the Distribution. Example: If Kurtosis is 2 then it is having more peak compare to the Kurtosis is 0.

1. How to do Standard normal variate (z) and standardization

Z =

Standardization: It is the process of converting any random variables into standard values so that it can follow the rules such as 68-95-99.7

1. What is Kernel density estimation?

Kernel Density Estimation helps to determine the distribution of the random varibales.

1. Importance of Sampling distribution & Central Limit theorem.

Central Limit Theorem helps to find the sample mean and variance from the population mean and variance.

Let x be any random variables from x1,x2……,xn

1. Importance of Q-Q Plot: Is a given random variable Gaussian distributed?

Q-Q plot is the quartile-quartile plot which helps to determine whether the 2 vectors A and B are Normal/Gaussian distribution or not.

1. What is Uniform Distribution and random number generators(<https://www.appliedaicourse.com/course/applied-ai-course-online/lessons/uniform-distribution-random-number-generators/>)
2. What Discrete and Continuous Uniform distributions?(<https://www.appliedaicourse.com/course/applied-ai-course-online/lessons/uniform-distribution-and-its-parameters-pdf-and-cdf/>)
3. How to randomly sample data points?(<https://www.appliedaicourse.com/course/applied-ai-course-online/lessons/uniform-distribution-random-number-generators/>)
4. Explain about Bernoulli and Binomial distribution?(<https://www.appliedaicourse.com/course/applied-ai-course-online/lessons/bernoulli-and-binomial-distribution/>)
5. What is Log-normal  and power law distribution?(<https://www.appliedaicourse.com/course/applied-ai-course-online/lessons/log-normal-distribution/>)
6. What is Power-law & Pareto distributions: PDF, examples(<https://www.appliedaicourse.com/course/applied-ai-course-online/lessons/power-law-distribution/>)
7. Explain about Box-Cox/Power transform?(<https://www.appliedaicourse.com/course/applied-ai-course-online/lessons/box-cox-transform/>)
8. What is Co-variance?(<https://www.appliedaicourse.com/course/applied-ai-course-online/lessons/co-variance/>)
9. Importance of Pearson Correlation Coefficient?(<https://www.appliedaicourse.com/course/applied-ai-course-online/lessons/pearson-correlation-coefficient-3/>)
10. Importance Spearman Rank Correlation Coefficient?(<https://www.appliedaicourse.com/course/applied-ai-course-online/lessons/spearman-rank-correlation-coefficient-3/>)
11. Correlation vs Causation?(<https://www.appliedaicourse.com/course/applied-ai-course-online/lessons/correlation-vs-causation-3/>)
12. What is Confidence Intervals?(<https://www.appliedaicourse.com/course/applied-ai-course-online/lessons/confidence-interval-c-i-introduction/>)
13. Confidence Interval vs Point estimate?
14. Explain about Hypothesis testing?(<https://www.appliedaicourse.com/course/applied-ai-course-online/lessons/hypothesis-testing-testing-methodology-null-hypothesis-p-value/>)
15. Define Hypothesis Testing methodology, Null-hypothesis, test-statistic, p-value?(<https://www.appliedaicourse.com/course/applied-ai-course-online/lessons/hypothesis-testing-testing-methodology-null-hypothesis-p-value/>)
16. How to do K-S Test for similarity of two distributions?(<https://www.appliedaicourse.com/course/applied-ai-course-online/lessons/k-s-test-for-similarity-of-two-distributions-3/>)