1. What is a random variable?
2. What are the conditions for a function to be a probability mass function?(http://www.statisticshowto.com/probability-mass-function-pmf/)
3. What are the conditions for a function to be a probability density function ?(Covered in our videos)
4. What is conditional probability?
5. State the Chain rule of conditional probabilities?(https://en.wikipedia.org/wiki/Chain_rule_(probability))
6. What are the conditions for independence and conditional independence of two random variables? (https://math.stackexchange.com/questions/22407/independence-and-conditional-independence-between-random-variables)
7. What are expectation, variance and covariance?(Covered in our videos)
8. Compare covariance and independence?(https://stats.stackexchange.com/questions/12842/covariance-and-independence)
9. What is the covariance for a vector of random variables?(https://math.stackexchange.com/questions/2697376/find-the-covariance-matrix-of-a-vector-of-random-variables)
10. What is a Bernoulli distribution?
11. What is a normal distribution?
12. What is the central limit theorem?
13. Write the formula for Bayes rule?
14. If two random variables are related in a deterministic way, how are the PDFs related?
15. What is Kullback-Leibler (KL) divergence?
16. Can KL divergence be used as a distance measure?
17. What is Bayes' Theorem? How is it useful in a machine learning context?
18. Why is "Naive" Bayes naive?
19. What's a Fourier transform?
20. What is the difference between covariance and correlation?
21. Is it possible capture the correlation between continuous and categorical variable? If yes, how?
22. What is the Box-Cox transformation used for?
23. What does P-value signify about the statistical data?
24. A test has a true positive rate of 100% and false positive rate of 5%. There is a population with a 1/1000 rate of having the condition the test identifies. Considering a positive test, what is the probability of having that condition?
25. How you can make data normal using Box-Cox transformation?
26. Explain about the box cox transformation in regression models.
27. What is the difference between skewed and uniform distribution?
28. What do you understand by Hypothesis in the content of Machine Learning?
29. How will you find the correlation between a categorical variable and a continuous variable ?
30. How to sample from a Normal Distribution with known mean and variance?