PUBLICIS SAPIENT

OT(Online Test):

1. Minimum Characters to be added in front to make a String Palindrome.
2. Find longest subarray with Prime sum in given Array.
3. Minimum number of times A has to be repeated such that B is a substring of it.
4. Find the difference between sums of two diagonals.
5. Minimize the sum of product of two arrays with permutations allowed.
6. Which Python operator can be used to check if an element is present in a list or other iterable?
7. What is the time complexity of the remove() operation on a list in Python?
8. Which of the following is known to be an NP Hard Problem?
9. Applications of a Topological Sort in a graph?
10. What is the difference between a clustered and non-clustered index in a relational database?
11. What will be the output of the following code snippet:
    List = [val** + 1 for val in range(5)];
    Print (list);
12. Which type of error will be raised after running below code snippet:
    f[1] = 50
13. What is edge computing, how is it different from traditional cloud computing?
14. What role do Kubernetes play in MLOs?
15. What is the docker command to know the status of all docker containers?
16. What is the git command to compare 2 specified branches?
17. What is the purpose of the validation set in the context of machine learning model training?
18. You are working on a dataset with 1000 samples, you decided to split the dataset into a training set (70%) and testing set (30%). How many sets will be in testing set?
19. What is 'Modeling Parallelism' in the context of distributed machine learning?
20. You are working on a machine learning project for a client. They have requested a detailed project plan that outlines the milestones and timelines of the project. What document can you create to meet this request?
21. You are monitoring a deployed image classification model. Over time you notice that its accuracy has decreased significantly. What could be a potential cause for this drift in model performance?
22. In a neural network, the weight and bias of each neuron is the most important step. If you can somehow get the correct value of the weight and bias for each

neuron, you can approximate any function. What would be the best way to approach this?

23. What is a rollback strategy in the context of model maintenance?

24. You are using the cross entropy loss for a binary classification problem. If the true label is 1 and the predicted probability is 0.8 what is the cross entropy loss?

25. How does the neuroevolution of Augmenting Topologies algorithm differ from the traditional neural network training approaches?

26. In the context of gradient descent optimization, what is the learning rate, and how does it affect the convergence of the optimization algorithm?

27. Which of the following is used to measure the strength of a linear relation between two variables?

28. Which of the following is used to handle outliers in a database?

29. Suppose you have been given NLP data to classify into different class. In the NLP data you have stop words and other unnecessary words.
Should you remove these before starting ml modeling?

30. Arrange the words given into meaningful sequence: Old, Adult, Infant, Child, Adolescent
Drum : Instrument :: Drill : ?

31. Religion appears to reduce the incidence of depression among those with medical problems. For instance, University of Michigan Professor of Sociology David Williams conducted a randomized survey of 720 adults suffering from leg and hip injuries in New Haven, Connecticut, in 1990. Those who attended religious services regularly were less depressed and less stressed by life events than those who did not attend. This finding held across age, race, socioeconomic status, educational attainment and religious affiliation. Religious affiliation alone did not have these effects, but religious behavior did.
The writer of the above statement makes which of the following assumptions?

32. In the US the proven oil reserves- the amount of oil considered extractable from known fields are at the same level as they were 10 years ago. Yet over this same period no new oil fields of any consequence have been discovered and the annual consumption of domestically produced oil has increased.
Which of the following, if true, best coincides with the discrepancy described below?

INTERVIEW:

1. What does Publicis Sapient do?
2. Why are you applying for this role? (If your branch is other than CS)

3. Case Study based questions.(for eg. data of visitor ID and visiting days where you are asked to predict customer of first week of Jan using ML)
4. Explain KNN such that you are explaining to a person who has no knowledge of ML.
5. Project based questions.
6. Some basic questions based on ML, SQL and DSA.
7. (Problem solving skills)If you are assigned a task what would be your approach for solving it?
8. If in a group task all members do not contribute equally, how would you tackle this problem?
9. How did you approach your intern task and what was the most difficult part?
10. Questions on college life.

11.Classes More Than 5 Students ,Average Selling Price,Rising Temperature
Sql leetcode questions

12. N meetings in a room, coin change 2, bell man ford algorithm,height of a binary tree , longest palindrome in a string -> leetcode questions