TYCS – AI
ASSIGNMENT – 02(MOODLE)

Basic questions related to Unit 2 on Artificial Neural Networks.
Submission Date : Sept 17,2020

Answer the questions below with enough

- **Diagrams ,**
- **Examples or**
- **Sample problems**

To prove your point. The references provided below are guidance.
Each answer would be graded on the above points

1. What's the trade-off between bias and variance?
2. How is KNN different from k-means clustering?
3. Define precision and recall.
4. What is Bayes' Theorem? How is it useful in a machine learning context?
5. Why is "Naive" Bayes naive?
6. What's the difference between probability and likelihood?
7. How is a decision tree pruned?
8. When should you use classification over regression?
9. Name an example where ensemble techniques might be useful.
10. How do you ensure you're not overfitting with a model?
11. How would you evaluate a logistic regression model?
12. What is 'training Set' and 'test Set' in a Machine Learning Model? How Much Data Will You Allocate for Your Training, Validation, and Test Sets?
13. Explain the Confusion Matrix with Respect to Machine Learning Algorithms.
14. What Is a False Positive and False Negative and How Are They Significant?
15. What is a Random Forest?
16. Considering a Long List of Machine Learning Algorithms, given a Data Set, How Do You Decide Which One to Use?
17. Explain bagging.
18. How are covariance and correlation different from one another?
19. State the differences between causality and correlation?
20. What is the difference between stochastic gradient descent (SGD) and gradient descent (GD)?
21. When does regularization come into play in Machine Learning?

References

https://www.simplilearn.com/tutorials/machine-learning-tutorial/machine-learning-interview-questions
https://www.mygreatlearning.com/blog/machine-learning-interview-questions/