

Advance Machine Learning

Reference Questions

1. Explain supervised learning and its types. List examples.
2. Explain unsupervised learning and its types. List examples.
3. Explain random forest algorithm with example.
4. Explain linear regression and its types with example.
5. Explain logistic regression and its types with example.
6. Explain SVM with example.
7. Explain types of kernel functions.
8. Construct a small dataset and show when linear regression fails?
9. Explain PCA with example.
10. Explain LSA with example.
11. Discuss BBN with example.
12. Discuss about PLSA and its advantages and disadvantages.
13. Explain EM algorithm with flow diagram.
14. List and discuss the dimensionality reduction techniques.
15. Explain Lasso Regression and its advantages.
16. Discuss user-based vs item-based collaborative filtering techniques.
17. Discuss content based recommendation with its advantages and disadvantages.
18. Discuss feature selection vs feature extraction.
19. Discuss any five evaluation metrics in machine learning.
20. Explain kernel ridge regression with example.
21. Discuss the theory behind the need of kernel methods.
22. Explain stacking, bagging and boosting.
23. Discuss conditional probability and bayes theorem with formula.
24. Draw a graph and show generalization, regularization and over fitting.
25. For the sample {1,2,3,4,5} find variance, SD, count, mean and sum of squares.

Note: The above questions are for reference purpose only not for exams.