

Assignment 1(UNIT 1)

- 1) What is deep learning? Explain its advantages and disadvantages.
- 2) Explain common architectural principles of deep network.
- 3) Define unsupervised learning. Explain difference between supervised and unsupervised learning.
- 4) Discuss bias-variance tradeoff.
- 5) What is learning representations from data? Explain in detail.
- 6) Explain any two popular industry tools used in deep learning.
- 7) Give co-relation between artificial intelligence, machine learning, and deep learning. Compare deep learning with machine learning.
- 8) Enlist and explain any four popular industrial tools used for deep learning.
- 9) How deep learning works in three figures, explain with example? Also explain common architectural principles of deep network.

Assignment 2(UNIT 2)

- 1) What is regularization? Explain difference between L1 and L2 regularization.
- 2) Explain, with architecture of single-layer feed forward network.
- 3) Explain with architecture of multi-layer feed forward network.
- 4) What is activation function? Explain any two activation functions.
- 5) Write a short note on L1 and L2 overfitting regularization.
- 6) What is a perceptron? What are the steps involved for training a perceptron in deep learning?
- 7) Write short note on: Hyperparameters used in neural network.
- 8) Explain how a neural network can be trained with backpropagation and forward propagation methods.
- 9) Define loss functions used in deep neural network. Enlist and explain any two of them in detail.
- 10) Explain sentimental analysis in detail.