

1. What is the primary advantage of deep learning over traditional machine learning?

- A. It requires less data
- B. It automates feature learning
- C. It is easier to implement
- D. It is always more accurate

2. In the context of neural networks, what role do activation functions play?

- A. They introduce nonlinearity
- B. They increase the number of neurons
- C. They reduce the number of layers
- D. They simplify the model

3. What is the main purpose of dropout in neural networks?

- A. To prevent overfitting
- B. To speed up training
- C. To increase the model's complexity
- D. To enhance feature extraction

4. Which variant of gradient descent computes gradients on a single random data point?

- A. Mini-batch Gradient Descent
- B. Full Batch Gradient Descent
- C. Stochastic Gradient Descent
- D. Adaptive Gradient Descent

5. What is the function of backpropagation in training a neural network?

- A. To apply activation functions
- B. To initialize weights
- C. To compute gradients
- D. To split data into training and validation sets