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1. Which layer in a DNN is responsible for receiving the raw input data?

- ☒ Input Layer
- ☐ Hidden Layer
- ☐ It determines the accuracy of the model.
- ☐ It has no significant role in machine learning

✔ Correct

Correct. The Input Layer is the first layer in a DNN and is designed to take in the raw, unprocessed data. For more information, refer to the video "What is Deep Learning?".

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2. Which type of Deep Neural Network is best suited for processing images and videos?

- ☐ Multi-Layer Perceptron (MLP)
- ☒ Convolutional Neural Network (CNN)
- ☐ Recurrent Neural Network (RNN)
- ☐ Generative Adversarial Network (GAN)

✔ Correct

Correct. Convolutional Neural Networks (CNNs) are specifically designed to handle image and video data due to their ability to capture spatial patterns. For more information, refer to the video on "What is Deep Learning?".



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3. What role do Weights play in an artificial neuron?

- ☐ Introduce non-linearity
- ☒ Determine the importance of each input
- ☐ C: Provide a constant offset
- ☐ Receive the initial data

✔ Correct

Correct. Weights are associated with each input and control how much influence each input has on the neuron's output. For more information, refer to the video on "Deep Dive into Neurons".

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4. What is the first step in the computation process of an artificial neuron?

- ☐ Apply the activation function
- ☒ Calculate the weighted sum
- ☐ Transmit the output signal
- ☐ Adjust the bias

✔ Correct

Correct. The first step is to calculate the weighted sum of the inputs, which involves multiplying each input by its corresponding weight and adding the bias. For more information, refer to the video on "Deep Dive into Neurons".

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1 / 1 point

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5. What is the initial step in the Gradient Descent algorithm?

- ☐ Calculate the gradient of the loss function
- ☐ Update the model parameters
- ☒ Initialize the model parameters with random values
- ☐ Repeat steps until convergence

 **Correct**

This is Correct. The first step is to assign random values to the model's parameters, serving as the starting point for optimization. For more information, refer to the video "Gradient Descent".