Optimizers and Data Shuffling

1. True/False. Multi-layer perceptrons always have a hidden layer.
   1. True
2. True/False. Multi-layer perceptrons are considered a type of feedforward neural network.
   1. True
3. Select the correct rule of thumb regarding training a neural network. In general, as you train a neural network:
   1. The log loss decreases and the accuracy increases

Keras Library

1. Building a Neural Network with the Sequential API in Keras implies that each layer
   1. can connect to only the previous and next layers.
2. An epoch in estimating a Deep Learning model refers to
   1. the number of times the entire input data set is used by the model.
3. An advantage of the Sigmoid activation function over the step activation function is:
   1. improved backpropagation due to nonzero gradients.

Final

1. What is the main function of backpropagation when training a Neural Network?
   1. Make adjustments to the weights
2. (True/False) The “vanishing gradient” problem can be solved using a different activation function.
   1. True
3. (True/False) Every node in a neural network has an activation function.
   1. True
4. These are all activation functions except:
   1. Leaky hyperbolic tangent
5. Deep Learning uses deep Neural Networks for all these uses, except
   1. Cases in which explainability is the main objective
6. These are all activation functions except:
   1. Pruning
7. (True/False) Optimizer approaches for Deep Learning Regularization use gradient descent:
   1. False
8. Stochastic gradient descent is this type of batching method:
   1. online learning
9. (True/False) The main purpose of data shuffling during the training of a Neural Network is to aid convergence and use the data in a different order each epoch.
   1. True
10. This is a high-level library that is commonly used to train deep learning models and runs on either TensorFlow or Theano:
    1. Keras