Free Questions for H13-311_V3.5

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Question 1

HarmonyOS can provide AI capabilities for external systems only through the integrated HMS Core.

Options:

A- TRUE

B- FALSE

Answer:

B

Explanation:

HarmonyOS provides AI capabilities not only through HMS Core (Huawei Mobile Services Core), but also through other system-level integrations and AI frameworks. While HMS Core is one way to offer AI functionalities, HarmonyOS also has native support for AI processing that can be accessed by external systems or applications beyond HMS Core.

Thus, the statement is false as AI capabilities are not limited solely to HMS Core in HarmonyOS.

Introduction to Huawei AI Platforms: Covers HarmonyOS and the various ways it integrates AI capabilities into external systems.

Question 2

Question Type: MultipleChoice

AI chips, also called AI accelerators, optimize matrix multiplication.

Options:

A- TRUE

B- FALSE

Answer:

A

Explanation:

AI chips, also known as AI accelerators, are specialized hardware designed to enhance the performance of AI workloads, particularly for tasks like matrix multiplication, which is heavily used in machine learning and deep learning algorithms. These chips optimize operations like matrix multiplications because they are computationally intensive and central to neural network computations (e.g., in forward and backward passes).

HCIA AI

Cutting-edge AI Applications: Discussion of AI chips and accelerators, with a focus on their role in improving computation efficiency.

Deep Learning Overview: Explains how neural network operations like matrix multiplication are optimized in AI hardware.

Question 3

Question Type: **MultipleChoice**

Which of the following functions are provided by the nn module of MindSpore?

Options:

A- Hyperparameter search modes such as GridSearch and RandomSearch

B- Model evaluation indicators such as F1 Score and AUC

C- Optimizers such as Momentum and Adam

D- Loss functions such as MSELoss and SoftmaxCrossEntropyWithLogits

Answer:

C, D

Explanation:

The nn module in MindSpore provides essential tools for building neural networks, including:

C . Optimizers: such as Momentum and Adam, which are used to adjust the weights of the model during training.

D . Loss functions: such as MSELoss (Mean Squared Error Loss) and SoftmaxCrossEntropyWithLogits, which are used to compute the difference between predicted and actual values.

The other options are incorrect because:

A . Hyperparameter search modes (like GridSearch and RandomSearch) are typically found in model training and tuning modules, but not in the nn module.

B . Model evaluation indicators like F1 Score and AUC are also handled by specific evaluation functions or libraries outside the nn module.

HCIA AI

AI Development Framework: Detailed coverage of MindSpore's nn module, its optimizers, and loss functions.

Introduction to Huawei AI Platforms: Explains various MindSpore features, including network construction and training.

Question 4

Question Type: MultipleChoice

Which of the following statements are false about softmax and logistic?

Options:

A- In terms of probability, softmax modeling uses the polynomial distribution, whereas logistic modeling uses the binomial distribution.

B- Multiple logistic regressions can be combined to achieve multi-class classification effects.

C- Logistic is used for binary classification problems, whereas softmax is used for multi-class classification problems.

D- In the multi-class classification of softmax regression, the output classes are not mutually exclusive. That is, the word 'Apple' belongs to both the 'fruit' and '3C' classes.

Answer:

A, D

Question 5

In MindSpore, mindspore.nn.Conv2d() is used to create a convolutional layer. Which of the following values can be passed to this API's "pad_mode" parameter?

Options:

A- pad

B- same

C- valid

D- nopadding

Answer:

B, C

Explanation:

The pad_mode parameter in mindspore.nn.Conv2d() can take values such as:

same: Ensures the output has the same spatial dimensions as the input.

valid: Performs convolution without padding, resulting in an output smaller than the input.

Other values like 'pad' and 'nopadding' are not valid options for the pad_mode parameter.

Question 6

When you use MindSpore to execute the following code, which of the following is the output?

from mindspore import ops

import mindspore

shape = (2, 2)

ones = ops.Ones()

output = ones(shape, dtype=mindspore.float32)

print(output)

Options:

A- [[1 1]
[1 1]]

B- [[1. 1.]
[1. 1.]]

C- 1

D- [[1. 1.
1. 1.]]

Answer:

B

Explanation:

In MindSpore, using ops.Ones() with a specified shape and dtype=mindspore.float32 will create a tensor of ones with floating-point values. The output will be a 2x2 matrix filled with 1.0 values. The floating-point format (with a decimal point) ensures that the output is in the form of [[1. 1.], [1. 1.]].

Question 7

Which of the following is the order of tensor [[0,1],[2,3]]?

Options:

A- 6

B- 3

C- 2

D- 4

Answer:

C

Explanation:

The order of a tensor refers to its rank, which is the number of dimensions it has. For the tensor [[0,1],[2,3]], the rank is 2 because it is a 2x2 matrix, meaning it has 2 dimensions.

Question 8

When you use MindSpore to execute the following code, which of the following is the output?

python

Copy code

```
x = Tensor(np.array([[1, 2], [3, 4]]), dtype.int32)

x.dtype
```

Options:

A- 2

B- mindspore.int32

C- 4

D- (2,2)

Answer:

B

Explanation:

In MindSpore, when you define a tensor using Tensor(np.array([[1, 2], [3, 4]]), dtype.int32), the dtype attribute returns the data type of the tensor, which in this case is mindspore.int32. This specifies the type of elements in the tensor.

Question 9

Question Type: **MultipleChoice**

When learning the MindSpore framework, John learns how to use callbacks and wants to use it for AI model training. For which of the following scenarios can John use the callback?

Options:

A- Early stopping

B- Adjusting an activation function

C- Saving model parameters

D- Monitoring loss values during training

Answer:

A, C, D

Explanation:

In MindSpore, callbacks can be used in various scenarios such as:

Early stopping: To stop training when the performance plateaus or certain criteria are met.

Saving model parameters: To save checkpoints during or after training using the ModelCheckpoint callback.

Monitoring loss values: To keep track of loss values during training using LossMonitor, allowing interventions if necessary.

Adjusting the activation function is not a typical use case for callbacks, as activation functions are usually set during model definition.

Question 10

Question Type: MultipleChoice

Which of the following are callback options provided by MindSpore?

Options:

A- SummaryCollector

B- TrainStep

C- ModelCheckpoint

D- LossMonitor

Answer:

A, C, D

Explanation:

MindSpore provides several callback functions that can be used to monitor, modify, or control the behavior of the training process. These include:

SummaryCollector: Collects summaries such as loss and accuracy for visualization and monitoring.

ModelCheckpoint: Saves model parameters during or after training.

LossMonitor: Monitors the loss values during training and can stop training if certain conditions are met.

TrainStep is not a callback but rather a fundamental step in training.

Question 11

In MindSpore, the basic unit of the neural network is nn.Cell.

Options:

A- TRUE

B- FALSE

Answer:

A

Explanation:

In MindSpore, nn.Cell is the basic unit of a neural network. It represents layers, models, and other neural network components, encapsulating the forward logic of the network. It allows users to define, organize, and manage neural network layers in MindSpore, making it a core building block in neural network construction.