Computer Vision Admissions

Time left: 39:55

QUESTIONS

1 2 3 4 5 6 7 8 9

Question 1

```
fruits = ['apple', 'banana', 'cherry']
```

In the above code snippet, what is the index of `'banana'` in the list `fruits`?

- ○ `3`
- ○ `0`
- ○ `2`
- ◉ `1`

Question 2

Select the appropriate performance metric for evaluating **regression tasks** in **machine learning** applications.

- ○ Jaccard Index
- ○ Cross-Entropy Loss
- ◉ **R-squared (Coefficient of Determination)**
- ○ True Positive Rate

Question 3

```
ntry_currencies = {
   'Nigeria': 'Naira',
   'China': 'Yuan',
   'India': 'Rupee'
}

new_currency = 'Yen'

country_currencies['Japan'] = new_currency
```

In the above code snippet, which of the following is a **key**?

- ○ `'Naira'`
- ○ `new_currency`
- ○ `country_currencies`
- ◉ `'Nigeria'`

Question 4

Which of the following is an example of a clustering problem in machine learning?

- ○ Calculating the most efficient shipping route across Asia
- ○ Assigning a risk category to a new loan application
- ◉ Categorizing regional dialects in India based on linguistic features
- ○ Estimating the age of a person from their photograph

Question 5

Which of the following is the answerType syntax for defining a **method** in a Python class?

- ○ `def method_name(parameters):` outside a class

- ○ `self.method_name(parameters):` inside a class
- ◉ `def method_name(self, parameters):` inside a class
- ○ `method_name(self, parameters):` inside a class

Question 6

In a Python function call, which of the following represents an argument?

- ○ `rectangle_area` in `rectangle_area(length, width)`
- ○ `()` in `rectangle_area()`
- ◉ `length` in `rectangle_area(length, width)`
- ○ `:` in `def rectangle_area():`

Question 7

What distinguishes a **development set** from a **hold-out set** in **machine learning** methodologies?

- ○ Development set is for training the initial model, while hold-out set is for ongoing development.
- ○ A development set is used after the hold-out set to fine-tune the final model.
- ◉ A development set is for model refinement while a hold-out set evaluates the tuned model.
- ○ Both sets are used iteratively throughout training to prevent overfitting.

Question 8

What describes **overfitting** in **machine learning**?

- ○ Another name for highly accurate machine learning models
- ○ When a model does not fit the training data closely enough
- ◉ When a model follows training data too closely, capturing noise instead of the underlying pattern
- ○ A technique used to increase model accuracy

Question 9

How do you multiply a **1x2 matrix** by a **2x2 matrix**? For example, consider the following matrices:

$$A = \begin{bmatrix} 1 & 2 \end{bmatrix}$$

$$B = \begin{bmatrix} 3 & 4 \\ 5 & 6 \end{bmatrix}$$

- ○ The result is a 1x2 matrix: [3, 8]
- ◉ The result is a 1x2 matrix: [13, 16]
- ○ It's not possible to multiply a 1x2 matrix by a 2x2 matrix
- ○ The result is a 2x2 matrix: [3, 4; 10, 12]

SUBMIT