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NPTEL (https://swayam.gov.in/explorer?ncCode=NPTEL) » Deep Learning - IIT Ropar (course)

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Course outline

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Week 12 : Assignment 12

The due date for submitting this assignment has passed.
                                          Due on 2024-10-16, 23:59 IST.
As per our records you have not submitted this assignment.

1) What is the primary purpose of the attention mechanism in neural networks?   ***1 point***

   ○ To reduce the size of the input data
   ○ To focus on specific parts of the input sequence
   ○ To increase the complexity of the model
   ○ To eliminate the need for recurrent connections

No, the answer is incorrect.
Score: 0

Accepted Answers:
To focus on specific parts of the input sequence

2) If we make the vocabulary for an encoder-decoder model using the given sentence. ***1 point***
What will be the size of our vocabulary?
Sentence: Convolutional neural networks excel at recognizing patterns and features within images, enhancing object detection accuracy significantly.

   ○ 13
   ○ 18
   ○ 14
   ○ 16

No, the answer is incorrect.
Score: 0

Accepted Answers:
18

3) Which of the following is a disadvantage of using an encoder-decoder model for sequence-to-sequence tasks?

○ The model requires a large amount of training data

○ The model is slow to train and requires a lot of computational resources

○ The generated output sequences may be limited by the capacity of the model

○ The model is prone to overfitting on the training data

No, the answer is incorrect.
Score: 0

Accepted Answers:
The generated output sequences may be limited by the capacity of the model

4) Which of the following attention mechanisms is most commonly used in the   **1 point**
Transformer model architecture?

○ Dot product attention

○ Additive attention

○ Multiplicative attention

○ All of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
Dot product attention

5) Which scenarios would most benefit from hierarchical attention mechanisms?   **1 point**

○ Summarizing long text documents

○ Classifying images in a dataset

○ Analyzing customer reviews or feedback data

○ Real-time processing of sensor data

No, the answer is incorrect.
Score: 0

Accepted Answers:
Summarizing long text documents

6) In a hierarchical attention network, what are the two primary levels of attention?   **1 point**

○ Character-level and word-level

○ Word-level and sentence-level

○ Sentence-level and document-level

○ Paragraph-level and document-level

No, the answer is incorrect.
Score: 0

Accepted Answers:
Word-level and sentence-level

7) Choose the correct statement with respect to the attention mechanism in the   **1 point**
encoder-decoder model

○ Attention mechanism can't be used for images

○ Only important features get high weights in the attention mechanism

○ Attention mechanism is not suitable for tasks like Machine Translation

12 (assessment? name=300)

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○ None of these

No, the answer is incorrect.
Score: 0

Accepted Answers:
Only important features get high weights in the attention mechanism

8) Which of the following is a disadvantage of using an encoder-decoder model for sequence-to-sequence tasks? **1 point**

○ The model requires a large amount of training data

○ The model is slow to train and requires a lot of computational resources

○ The generated output sequences may be limited by the capacity of the model

○ The model is prone to overfitting on the training data

No, the answer is incorrect.
Score: 0

Accepted Answers:
The generated output sequences may be limited by the capacity of the model

9) What is the purpose of the softmax function in the attention mechanism? **1 point**

○ To normalize the attention weights

○ To compute the dot product between the query and key vectors

○ To compute the element-wise product between the query and key vectors

○ To apply a non-linear activation function to the attention weights

No, the answer is incorrect.
Score: 0

Accepted Answers:
To normalize the attention weights

10) Which of the following is a major advantage of using an attention mechanism in an encoder-decoder model? **1 point**

○ Reduced computational complexity

○ Improved generalization to new data

○ Reduced risk of overfitting

○ None of These

No, the answer is incorrect.
Score: 0

Accepted Answers:
Improved generalization to new data