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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) Which of the following are benefits of using attention mechanisms in neural networks? ***1 point***

- Improved handling of long-range dependencies
- Enhanced interpretability of model predictions
- Reduction in model complexity
- Ability to handle variable-length input sequences

No, the answer is incorrect.
Score: 0

Accepted Answers:
Improved handling of long-range dependencies
Enhanced interpretability of model predictions
Ability to handle variable-length input sequences

3) If we make the vocabulary for an encoder-decoder model using the given sentence. 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

4) 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

5) In the encoder-decoder architecture with attention, where is the context vector typically computed? ***1 point***

- In the encoder
- In the decoder
- Between the encoder and decoder
- After the decoder

No, the answer is incorrect.
Score: 0

Accepted Answers:
Between the encoder and decoder

6) Which of the following is NOT a component of the attention mechanism? ***1 point***

- Decoder
- Key
- Value
- Encoder

No, the answer is incorrect.
Score: 0

Accepted Answers:
Decoder
Encoder

7) What is the purpose of the softmax function in the attention mechanism?

- To normalize the attention weights

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- 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

8) 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

9) Which of the following output functions is most commonly used in the decoder of an encoder-decoder model for translation tasks? ***1 point***

- Sigmoid
- ReLU
- Softmax
- Tanh

No, the answer is incorrect.
Score: 0

Accepted Answers:
Softmax

10) In the encoder-decoder model, what is the role of the decoder? ***1 point***

- To generate output based on the input representations.
- To encode the input
- To learn the attention mechanism
- None of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
To generate output based on the input representations.