X

Week 12 : Assignment 12

The due date for submitting this assignment has passed.

Due on 2024-10-16, 23:59 IST.

Assignment submitted on 2024-10-16, 22:16 IST

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

Yes, the answer is correct.
Score: 1

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 attention mechanisms is most commonly used in the Transformer model architecture? ***1 point***

- (●) Dot product attention
- ( ) Additive attention
- ( ) Multiplicative attention
- ( ) All of the above

Yes, the answer is correct.
Score: 1
Accepted Answers:
Dot product attention

4) 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

Yes, the answer is correct.
Score: 1
Accepted Answers:
Word-level and sentence-level

5) Which of the following are the advantages of using attention mechanisms in encoder-decoder models? ***1 point***

- [ ] Reduced computational complexity
- [x] Ability to handle variable-length input sequences
- [x] Improved gradient flow during training
- [x] Automatic feature selection
- [ ] Reduced memory requirements

Yes, the answer is correct.
Score: 1
Accepted Answers:
Ability to handle variable-length input sequences
Improved gradient flow during training
Automatic feature selection

6) 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

Yes, the answer is correct.
Score: 1
Accepted Answers:
Between the encoder and decoder

12 (assessment?name=300)

Download Videos ()

Books ()

Text Transcripts ()

Problem Solving Session - July 2024 ()

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

- 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
- None of these

Yes, the answer is correct.
Score: 1
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

Yes, the answer is correct.
Score: 1
Accepted Answers:
The generated output sequences may be limited by the capacity of the model

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

- [x] Decoder
- [ ] Key
- [ ] Value
- [ ] Encoder

Partially Correct.
Score: 0.5
Accepted Answers:
Decoder
Encoder

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

Yes, the answer is correct.
Score: 1
Accepted Answers:
Improved generalization to new data