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



Course outline **About** NPTEL () How does an **NPTEL** online course work? () Week 1 () Week 2 () Week 3 () week 4 () Week 5 () Week 6 () Week 7 () Week 8 () Week 9 () week 10 ()

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 1 point networks? 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 Week 11 () images, enhancing object detection accuracy significantly. Week 12 () **13 18** Introduction to **14** Encoder Decoder **16** Models (unit? No. the answer is incorrect. unit=162&less Score: 0 on=163)Accepted Answers: Applications of 18 Encoder 4) Which scenarios would most benefit from hierarchical attention mechanisms? 1 point Decoder models (unit? Summarizing long text documents unit=162&less on=164) Classifying images in a dataset Analyzing customer reviews or feedback data Attention Mechanism Real-time processing of sensor data (unit? No. the answer is incorrect. unit=162&less Score: 0 on=165) Accepted Answers: Summarizing long text documents Attention Mechanism (Contd.) (unit? 5) In the encoder-decoder architecture with attention, where is the context vector 1 point unit=162&less typically computed? on=166) In the encoder Attention over In the decoder images (unit? unit=162&less Between the encoder and decoder on=167) After the decoder Hierarchical No. the answer is incorrect. Attention Score: 0 (unit? Accepted Answers: unit=162&less Between the encoder and decoder on=168) Lecture 6) Which of the following is NOT a component of the attention mechanism? 1 point Material for Decoder Week 12 (unit? Key unit=162&less Value on=169) Encoder Week 12 No, the answer is incorrect. Feedback Score: 0 Form: Deep Accepted Answers: Learning - IIT Decoder Ropar (unit? Encoder unit=162&less on=195) 7) What is the purpose of the softmax function in the attention mechanism? O Quiz: Week

Assignment

To normalize the attention weights

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12 (assessment?	To compute the dot product between the query and key vectors
name=300)	To compute the element-wise product between the query and key vectors
D	To apply a non-linear activation function to the attention weights
Download Videos ()	No, the answer is incorrect. Score: 0
Books ()	Accepted Answers: To normalize the attention weights
Text Transcripts ()	8) Which of the following is a major advantage of using an attention mechanism in an <i>1 point</i> encoder-decoder model?
	Reduced computational complexity
Problem Solving Session - July 2024 ()	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 1 point encoder-decoder model for translation tasks?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

