DAY5_QUIZ_DLWORKSHOP(0/01/2025)

Total points   14/20

Winter School Certificate Program on "Deep Essentials"

✓ 1.Untitled Question What is the primary advantage of LSTM over   *2/2
traditional RNN?

○ a) LSTM is simpler and faster.

◉ b) LSTM can capture long-term dependencies.   ✓

○ c) LSTM is better suited for classification tasks.

○ d) LSTM requires less data to train.

✓ 2. What does the GRU model use to update its memory content? *   2/2

○ a) Forget gate and update gate.

○ b) Input gate and output gate.

○ c) Forget gate and output gate.

◉ d) Reset gate and update gate.   ✓

✕   3. What does the forget gate in an LSTM do? *   0/2

○   a) Determines how much of the current input is passed to the output.

○   b) Decides how much of the previous memory should be forgotten.

◉   c) Controls how much of the previous output is used for input.   ✕

○   d) Combines previous states with the current state.

Correct answer

◉   b) Decides how much of the previous memory should be forgotten.

✓   4. Which architecture is more efficient for learning long-term   *2/2
        dependencies: LSTM, GRU, or traditional RNN?

◉   a) LSTM   ✓

○   b) GRU

○   c) Traditional RNN

○   d) All are equally efficient

✕   5. How does GRU compare to LSTM in terms of complexity and number   *0/2
     of parameters?

    ◉   a) GRU is more complex than LSTM and has more parameters.   ✕

    ○   b) GRU has fewer parameters and is computationally less expensive than LSTM.

    ○   c) GRU and LSTM have identical complexity and number of parameters.

    ○   d) GRU is simpler than LSTM but has more parameters

Correct answer

    ◉   b) GRU has fewer parameters and is computationally less expensive than LSTM.

✓   6. Which of the following architectures would benefit most from using   *2/2
     LSTM or GRU layers?

    ○   a) Image classification tasks where data is represented as pixels.

    ◉   b) Time-series forecasting, where previous time steps influence future   ✓
        predictions.

    ○   c) Non-sequential tasks that don't involve memory of previous data points.

    ○   d) Tasks requiring fast, real-time predictions with no dependencies on past data.

✓ 7. In LSTM networks, what is the role of the cell state and how does it   *2/2
affect the model's predictions?

○ a) The cell state holds a "compressed" version of the input sequence and influences
only the final prediction.

◉ b) The cell state acts as a memory, carrying important information throughout   ✓
the sequence and modulating the effect of each gate.

○ c) The cell state is a static layer that only contributes to the calculation of the
output at each timestep.

○ d) The cell state is responsible for generating the hidden state, but it does not
influence the final predictions

✓ 8. What is the role of the activation function (such as tanh or ReLU) in   *2/2
RNNs?

○ a) To normalize the input data before it is processed.

◉ b) To control the flow of information and introduce non-linearity into the   ✓
network.

○ c) To make the model less prone to overfitting.

○ d) To prevent the vanishing gradient problem

✓ 9. In the standard RNN architecture, why is it prone to the vanishing   *2/2
gradient problem?

○ a) The network uses too many layers, leading to instability in training.

◉ b) The gradients of the loss function shrink exponentially during   ✓
backpropagation, making it difficult for the network to learn long-term
dependencies.

○ c) RNNs do not have enough parameters to store information from previous time
steps.

○ d) The recurrent weights are too large, causing overfitting.

✗ 10. In the context of RNNs, what does "teacher forcing" refer to during   *0/2
training?

○ a) Using the ground truth as the input for the next timestep during training.

◉ b) Using the predictions from the previous timestep as the input for the next   ✗
timestep.

○ c) Freezing the weights of the RNN to avoid overfitting during training.

○ d) Ignoring the previous timestep's hidden state to make predictions independently.

Correct answer

◉ a) Using the ground truth as the input for the next timestep during training.

This form was created inside of Vivekananda Institute of Professional Studies.
Does this form look suspicious? Report

Google Forms