

<b>Started on</b>	Monday, 3 February 2025, 12:10 PM
<b>State</b>	Finished
<b>Completed on</b>	Monday, 3 February 2025, 12:15 PM
<b>Time taken</b>	5 mins 3 secs
<b>Marks</b>	10.00/10.00
<b>Grade</b>	<b>100.00</b> out of 100.00

### Question 1

Complete

Mark 1.00 out of 1.00

What is the role of padding in the dataset?

- ☒ a. To make all input sequences the same length
- ☐ b. To improve the accuracy of sentiment classification
- ☐ c. To replace missing words with synonyms
- ☐ d. To remove unnecessary words from sentences

### Question 2

Complete

Mark 1.00 out of 1.00

What is the purpose of `TensorDataset` in PyTorch?

- ☐ a. To split datasets into training and testing sets
- ☐ b. To convert categorical data into numerical form
- ☐ c. To apply data augmentation to text data
- ☒ d. To create a dataset from tensors for PyTorch DataLoader

### Question 3

Complete

Mark 1.00 out of 1.00

After passing through the embedding layer, what is the shape of the output tensor?

- ☐ a. (batch\_size, hidden\_size, max\_len)
- ☐ b. (batch\_size, embedding\_dim, max\_len)
- ☒ c. (batch\_size, max\_len, embedding\_dim)
- ☐ d. (batch\_size, num\_classes)

**Question 4**

Complete

Mark 1.00 out of 1.00

What is the shape of the hidden state in an LSTM layer?

- ☐ a. (batch\_size, hidden\_size)
- ☐ b. (batch\_size, num\_classes)
- ☐ c. (batch\_size, max\_len, hidden\_size)
- ☒ d. (num\_layers, batch\_size, hidden\_size)

**Question 5**

Complete

Mark 1.00 out of 1.00

What is the shape of the padded sequence tensor `X`?

- ☐ a. (batch\_size, num\_classes)
- ☐ b. (number\_of\_samples, hidden\_size)
- ☐ c. (batch\_size, embedding\_dim)
- ☒ d. (number\_of\_samples, max\_len)

**Question 6**

Complete

Mark 1.00 out of 1.00

What is the shape of the context vector in attention mechanisms?

- ☐ a. (batch\_size, max\_len, num\_classes)
- ☐ b. (batch\_size, max\_len, hidden\_size)
- ☐ c. (batch\_size, num\_heads, max\_len, hidden\_size)
- ☒ d. (batch\_size, hidden\_size)

**Question 7**

Complete

Mark 1.00 out of 1.00

How does the `predict\_sentiment` function process input text?

- ☐ a. It converts text to one-hot vectors and applies an embedding layer.
- ☒ b. It tokenizes, converts words to indices, pads sequences, and then passes them to the model.
- ☐ c. It directly passes raw text to the model.
- ☐ d. It only tokenizes the input before passing it to the model.

**Question 8**

Complete

Mark 1.00 out of 1.00

What is the shape of the output from an LSTM layer before applying attention?

- ☐ a. (batch\_size, num\_classes)
- ☐ b. (batch\_size, hidden\_size, max\_len)
- ☒ c. (batch\_size, max\_len, hidden\_size)
- ☐ d. (batch\_size, embedding\_dim, hidden\_size)

**Question 9**

Complete

Mark 1.00 out of 1.00

What is the purpose of the `simple\_tokenize` function in the code?

- ☒ a. To split text into lowercase words based on spaces
- ☐ b. To remove punctuation from text
- ☐ c. To convert text into word embeddings
- ☐ d. To convert words into numbers

**Question 10**

Complete

Mark 1.00 out of 1.00

How is the attention score calculated in the `ScaledDotAttention` class?

- ☐ a.  $Q \times K^T$
- ☒ b.  $Q \times K^T / \sqrt{\text{hidden\_size}}$
- ☐ c.  $Q \times V^T / \sqrt{\text{hidden\_size}}$
- ☐ d.  $Q \times K$