

Kahoot!

DL Lecture Quiz 3 (2021)

0 favorites

1 play

1 player


A private kahoot

Questions (8)

1 - Quiz

If $y = g(x)$ then $\partial f(y)/\partial x$ is

30 sec

- | | | |
|--|---|---|
|  | $\partial f(y)/\partial y * \partial g(x)/\partial x$ | ✓ |
|  | undefined | ✗ |
|  | $\partial f(y)/\partial g(x)$ | ✗ |
|  | 0 | ✗ |

2 - Quiz

For a function $f(x)$ from $\mathbb{R}^m \rightarrow \mathbb{R}^n$, the dimensionality of the Jacobian is:





20 sec

- | | | |
|--|--------------|---|
|  | $n \times m$ | ✓ |
|  | $m \times n$ | ✗ |
|  | $m \times m$ | ✗ |
|  | $n \times n$ | ✗ |

3 - Quiz

The ReLU activation is:

30 sec

-  Differentiable everywhere and discontinuous at 0 ✗
-  Continuous everywhere and non-differentiable at 0 ✓
-  Differentiable and discontinuous everywhere ✗
-  Differentiable and continuous everywhere ✗

4 - Quiz

Gradient of loss w.r.t. a single neuron's activation having n incoming connections and m outgoing connections is:

20 sec

-  A matrix of dimension $m \times n$ ✗
-  A matrix of dimension $n \times m$ ✗
-  A vector of dimension $n \times 1$ ✗
-  A scalar ✓

5 - Quiz

Gradient of loss w.r.t. all neurons' weights in a layer with k neurons and n incoming connections/neuron is:


20 sec

-  A vector of dimension $n \times 1$ ✗
-  A matrix of dimension $n \times k$ ✓
-  A vector of dimension $k \times 1$ ✗
-  A scalar ✗

6 - Quiz

The time complexity of the forward pass in MLP with M layers (k units each) with batch size B & dimensionality k is:



30 sec

- | | | |
|--|------------------|---|
|  | $O(B * k^2)$ |  |
|  | $O(B * k)$ |  |
|  | $O(M * B * k^2)$ |  |
|  | $O(M * B * k)$ |  |

7 - Quiz

The time complexity of the backward pass in MLP with M layers (k units each) with batch size B & dimensionality k is:

20 sec

- | | | |
|--|-------------------------------------|---|
|  | $O(M * B^2 * k)$ |  |
|  | $O(\max(M * B * k^2, M * B^2 * k))$ |  |
|  | $O(M * B * k^2)$ |  |
|  | $O(M * B * k)$ |  |

8 - Quiz

The memory complexity of training an MLP with M layers (k units each) with batch size B & dimensionality k is:

60 sec

- | | | |
|--|--------------------------|---|
|  | $O(B * k + M * k^2)$ |  |
|  | $O(M * B * k^2)$ |  |
|  | $O(M * B * k + M * k^2)$ |  |
|  | $O(B * k + k^2)$ |  |