

Kahoot!

DL Lecture Quiz 2 (2021)

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A private kahoot

Questions (10)

1 - Quiz

Logistic Regression (with linear basis functions) is a ...

20 sec

- | | | |
|---|----------------------------------|---|
|  | linear regression method | ✗ |
|  | linear classification method | ✓ |
|  | non-linear regression method | ✗ |
|  | non-linear classification method | ✗ |

2 - Quiz

How is the logistic sigmoid function defined?





20 sec

- | | | |
|--|--------------------------------|---|
|  | $f(x) = 1 / (1 + e^x)$ | ✗ |
|  | $f(x) = 1 / (1 + e^{-x})$ | ✓ |
|  | $f(x) = e^x / (1 + e^x)$ | ✓ |
|  | $f(x) = e^{-x} / (1 + e^{-x})$ | ✗ |

3 - Quiz

In Logistic regression, where does a point have to lie to have a probability of 1 of belonging to class 1?

20 sec

-  Infinitely far away from the decision boundary on the side of class 1 ✓
-  On the decision boundary ✗
-  1 unit away from the decision boundary on the side of class 1 ✗
-  At the origin ✗

4 - Quiz

Which of the following gives the tightest bound on the time complexity of multiplying an $m \times n$ with an $n \times p$ matrix?


30 sec

-  $O(m * n * p)$ ✓
-  $O(m * n + n * p)$ ✗
-  $O(m * n^2 * p)$ ✗
-  $O(\max(m * n, n * p))$ ✗

5 - Quiz

Which of the following gives the tightest bound on the memory complexity of multiplying an $m \times n$ with an $n \times p$ matrix:


20 sec

-  $O(m * n * p)$ ✗
-  $O(m * n + n * p + m * p)$ ✓
-  $O(m * n^2 * p)$ ✗
-  $O(\max(m * n, n * p, m * p))$ ✓

6 - Quiz

Which of the following activation functions is strictly positive?


20 sec

- | | | |
|--|------------------|---|
|  | relu |  |
|  | logistic sigmoid |  |
|  | linear |  |
|  | tanh |  |

7 - Quiz

What relationship exists between the cross-entropy loss (CE) and accuracy (AC)


30 sec

- | | | |
|--|-----------------------------|---|
|  | lower CE implies higher AC |  |
|  | AC = 100% implies CE = 0 |  |
|  | higher CE implies higher AC |  |
|  | CE = 0 implies AC = 100% |  |

8 - Quiz

The minimum number of hidden layers needed to approximate an arbitrary non-linear bounded and continuous function is:

20 sec

- | | | |
|--|-------------------------|---|
|  | 1 |  |
|  | 0 |  |
|  | Depends on the function |  |
|  | 2 |  |

9 - Quiz

Given the following matrices: A is $m \times n$; B is $n \times p$; C is $m \times 1$. We can:

30 sec

- | | | |
|--|----------------------------|---|
|  | Add A and C mathematically | ✗ |
|  | Add B and C mathematically | ✗ |
|  | Add A and C in numpy | ✓ |
|  | Add B and C in numpy | ✗ |

10 - Quiz

A is $m \times n \times p \times q$; B is $m \times n$; C is $p \times q$. Which of these operations are valid in numpy (will not raise an exception)?

60 sec

- | | | |
|--|---------|---|
|  | $A + B$ | ✗ |
|  | $B * A$ | ✗ |
|  | $A + C$ | ✓ |
|  | $C * A$ | ✓ |