Assignment - 2 (Quiz) - Results

Attempt 2 of 2

Written Dec 26, 2023 7:13 PM - Dec 26, 2023 7:20 PM

Attempt Score **0.8 / 2 - 40 %**

Overall Grade (Highest Attempt) **1.6 / 2 - 80 %**

Question 1

Consider a dataset in which a sample **x** can belong to either the "survived" class (labeled as 1) or the "not survived" class (labeled as 0). Suppose there are 4 patients in the dataset in which the first two survived and the last two did not. Using a particular weight vector **w** (bias trick applied), we get:

$$\begin{aligned} \sigma\left(\mathbf{w}^{\mathrm{T}}\mathbf{x}^{(1)}\right) &= 0.1, \\ 1-\sigma\left(\mathbf{w}^{\mathrm{T}}\mathbf{x}^{(2)}\right) &= 0.2, \\ \sigma\left(\mathbf{w}^{\mathrm{T}}\mathbf{x}^{(3)}\right) &= 0.95, \\ 1-\sigma\left(\mathbf{w}^{\mathrm{T}}\mathbf{x}^{(4)}\right) &= 0.15. \end{aligned}$$

Without calculation, we can say that the loss is the highest for patient _____.

- ➡ ◯ 3
- ✖ ◯ 1
- ◯ 2
- ◯ 4

Question 2

Consider a dataset in which a sample has 2 output classes (survived/not survived) and 5 features:
(1) Heart rate (2) Blood pressure (3) Temperature (4) Age (5) Gender

The 3rd column of the weights matrix corresponds to what?

- ✔ ◯ Weights for the feature "Temperature"
- ◯ Weights for the "survived" output class

- Weights for the feature "Blood Pressure"
- Weights for the "not survived" output class

Question 3

Suppose we have 10^4 samples corresponding to 10 output labels and that each sample is a 32 x 32 grayscale image. What will be the shape of the weights matrix used for calculating the sample's raw scores as **z = Wx + b**?

- 11 x 1024
- 1024 x 11
- ✘ 1024 x 10
- ➡ 10 x 1024

Question 4

Suppose we apply batch processing for a dataset with 1024 samples using a batch size 16. How many times will the weights be updated in one epoch?

- 8
- ✔ 64
- 16
- 32

Question 5

The sensitivity of the loss with respect to some weight parameter evaluated at its current value is -10. This means that decreasing this weight (by a tiny amount) would _____ the loss.

- Not change
- ✘ Decrease
- ➡ Increase
- Negate

Done