Assignment-5 (Quiz) - Results

Attempt 2 of 2

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Attempt Score **1.6 / 2 - 80 %**

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

Question 1

In a 3-layer neural network with $n^{[0]} = 10, n^{[1]} = 8, n^{[2]} = 3$, the shape of the matrix $\mathbf{W}^{[1]}$ is _____.

- 11 x 8
- ➡ 8 x 11
- ✖ 8 x 10
- 10 x 8

Question 2

A 2-layer neural network with 5 neurons in each layer has a total of _____ parameters (i.e. weights and biases).

- 59
- 62
- 61
- ✔ 60

Question 3

In a 2-layer neural network with 5 neurons in each layer, the shape of the gradient $\nabla_{\mathbf{W}^{[1]}}\left(\mathbf{z}^{[1]}\right)$ (local weight gradient of dense layer 1) is _____.

- ✔ 5 x 6 x 5
- 6 x 5 x 5
- 5 x 5 x 6
- 6 x 6 x 5

Question 4

When running a batch of size 32 through an L-layer deep neural network, where each sample could possibly belong to one of 3 output categories, the shape of the raw scores matrix $\mathbf{Z}^{[L]}$ is _____.

- ✔ 3 x 32
- 32 x 3
- 32 x 32
- 3 x 3

Question 5

Which one of the following is the correct categorical cross-entropy loss expression for a sample with correct one-hot encoded output label vector $\mathbf{y}$ when using a 5-layer neural network?

- ✔ $-\sum_k y_k \log\left(a_k^{[5]}\right)$
- $-\sum_k a_k^{[5]} \log\left(y_k\right)$
- $-\sum_k y_k \log\left(z_k^{[5]}\right)$
- $-\sum_k y_k \log\left(a_k^{[6]}\right)$

Done