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                Graded Quiz • 30 min

Due Feb 5, 11:59 PM EET

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Practice quiz: Multiclass Classification

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Try again

1.   **1 / 1 point**

Remind me later

Softmax regression (4 possible outputs)

✗ $z_1 = \vec{w}_1 \cdot \vec{x} + b_1$

$a_1 = \dfrac{e^{z_1}}{e^{z_1} + e^{z_2} + e^{z_3} + e^{z_4}}$

✗ ○ □ △

$= P(y = 1|\vec{x})$ 0.30

○ $z_2 = \vec{w}_2 \cdot \vec{x} + b_2$

$a_2 = \dfrac{e^{z_2}}{e^{z_1} + e^{z_2} + e^{z_3} + e^{z_4}}$

$= P(y = 2|\vec{x})$ 0.20

□ $z_3 = \vec{w}_3 \cdot \vec{x} + b_3$

$a_3 = \dfrac{e^{z_3}}{e^{z_1} + e^{z_2} + e^{z_3} + e^{z_4}}$

$= P(y = 3|\vec{x})$ 0.15

△ $z_4 = \vec{w}_4 \cdot \vec{x} + b_4$

$a_4 = \dfrac{e^{z_4}}{e^{z_1} + e^{z_2} + e^{z_3} + e^{z_4}}$

$= P(y = 4|\vec{x})$ 0.35

👍 Lil

For a multiclass classification task that has 4 possible outputs, the sum of all the activations adds up to 1. For a multiclass classification task that has 3 possible