Practice quiz: Classification with logistic regression

Congratulations! You passed!

Grade received	Latest Submission Grade	To pass
100%	100%	80% or higher

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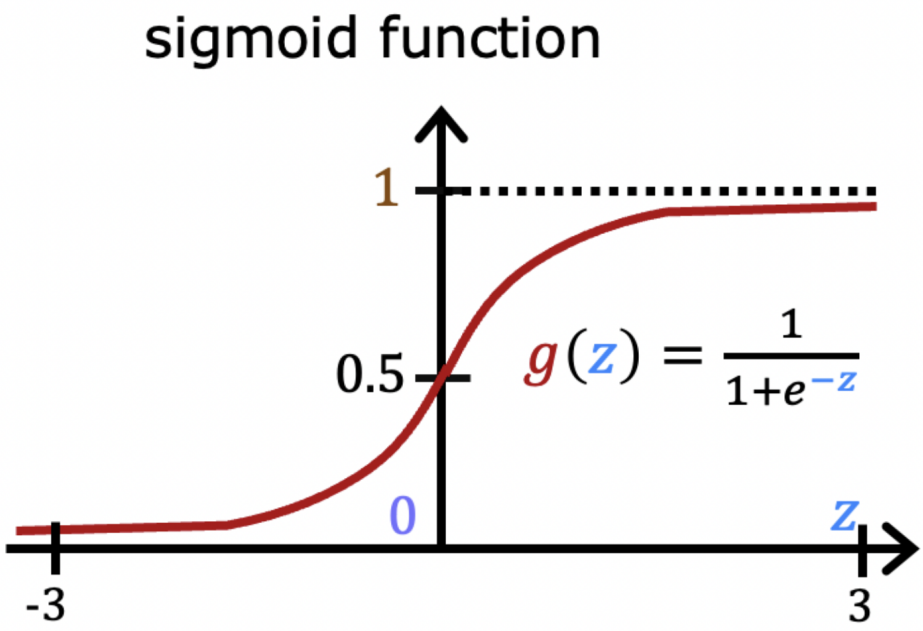
1. Which is an example of a classification task? **1 / 1 point**

- Based on a patient's blood pressure, determine how much blood pressure medication (a dosage measured in milligrams) the patient should be prescribed.
- Based on a patient's age and blood pressure, determine how much blood pressure medication (measured in milligrams) the patient should be prescribed.
- Based on the size of each tumor, determine if each tumor is malignant (cancerous) or not.

Correct
This task predicts one of two classes, malignant or not malignant.

2. Recall the sigmoid function is $g(z) = \frac{1}{1+e^{-z}}$ **1 / 1 point**



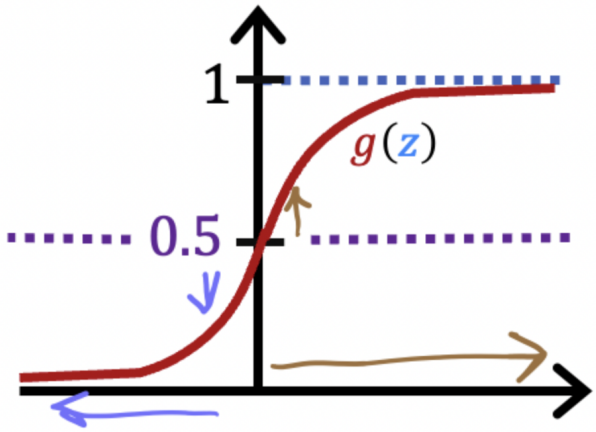
If z is a large positive number, then:

- (●) $g(z)$ is near one (1)
- ( ) $g(z)$ is near negative one (-1)
- ( ) $g(z)$ will be near zero (0)
- ( ) $g(z)$ will be near 0.5

Correct
Say z = $+100$. So e^{-z} is then e^{-100}, a really small positive number. So, $g(z) = \frac{1}{1+\text{a small positive number}}$ which is close to 1

3.

1 / 1 point



A cat photo classification model predicts 1 if it's a cat, and 0 if it's not a cat. For a particular photograph, the logistic regression model outputs $g(z)$ (a number between 0 and 1). Which of these would be a reasonable criteria to decide whether to predict if it's a cat?

- (●) Predict it is a cat if g(z) >= 0.5
- ( ) Predict it is a cat if g(z) < 0.5
- ( ) Predict it is a cat if g(z) = 0.5
- ( ) Predict it is a cat if g(z) < 0.7

Correct

Think of g(z) as the probability that the photo is of a cat. When this number is at or above the threshold of 0.5, predict that it is a cat.