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4.8.R1

1/1 point (graded)

Which of the following statements best explains the relationship between Quadratic Discriminant Analysis and naive Bayes with Gaussian distributions in each class?

- (●) Quadratic Discriminant Analysis is a more flexible class of models than naive Bayes ✔
- ( ) Quadratic Discriminant Analysis is a less flexible class of models than naive Bayes
- ( ) Quadratic Discriminant Analysis is an equivalently flexible class of models to naive Bayes
- ( ) For some problems Quadratic Discriminant Analysis is more flexible than naive Bayes, for others the opposite is true.

Explanation

With Gaussian distributions, naive Bayes is equivalent to Quadratic Discriminant Analysis with the additional requirement that each class covariance matrix Σ_k be diagonal. Thus, Quadratic Discriminant Analysis is more flexible.

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