4.8 Review Questions

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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Answers are displayed within the problem