BS 806

Homework 11

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**Question 2**

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| --- | --- |
| **Classification Method** | **Area Under Curve** |
| Logistic Regression | 0.6645022 |
| Classification Tree | 0.6277056 |
| Linear Discriminant Analysis | 0.6590909 |
| Quadratic Discriminant Analysis | 0.5508658 |

Out of the four classification methods, the classification rule created by logistic regression gave the largest area under the ROC curve, 0.6645, so would have the least misclassification errors.

**Question 3**

Part A

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Misclassification Error Table | | Predicted Class | | Total True/False |
| **0** | **1** |
| True Class | **0** | 44  true negative | 22  false positive | 66 |
| **1** | 27  false negative | 50  true positive | 77 |
| Predicted True/False | | 71 | 72 | 143 |

Part B

accuracy =

misclassification rate =

Part C

false positive = sensitivity =

false negative = specificity =

Part D

positive predictive value (PPV) =

negative predictive value (NPV) =