图形用户界面, 文本, 应用程序

描述已自动生成

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1. **Exercises on Discriminant Analysis**

**1.1-1 Probabilities πk**:

**Mean**:

**Var**:

**The density of X**:

**1.1-2 pˆk(x)**

**Give x=0.5:**

**Then:**

* + 1. **The function lda() in R:**

文本

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For x=0.5(the 4th number):

|  |  |  |
| --- | --- | --- |
|  | R | CALCULATE |
|  | 0.26826346 |  |
|  | 0.731736540 |  |

This may be due to rounding during calculation.

* 1. **Measuring the accuracy with a ROC curve**

图示

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1. The vertical axis represents Sensitivity: shows the classifier’s ability to correctly identify positive cases.
2. The horizontal axis represents Specificity (False Positive Rate): shows the proportion of negative cases incorrectly classified as positive.
3. The shape of the ROC curve indicates the trade-off between sensitivity and specificity at different thresholds.
4. The AUC is 0.930, which means the classifier has excellent overall performance.