# In-Class-2

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1. What is the k value in” k-fold cross-validation”?
2. K = 3
3. Create a confusion matrix for the test results.

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| --- | --- | --- | --- | --- |
| P r e d | Actual | | | |
|  | Cat | Dog | Fox |
| Cat | 3 | 1 | 0 |
| Dog | 3 | 3 | 2 |
| Fox | 1 | 0 | 2 |

1. Show the formulas and calculate the value of the following metrics:

Accuracy = TP / (TP + FP + TN + FN)

Precision = TP / (TP + FP)

Recall = TP / (TP + FN)

1. Accuracy = 8 / 15
2. Pcat = 3/4
3. Pdog = 3/8
4. Pfox = 2/3
5. Rcat = 3/7
6. Rdog = 3/4
7. Rfox = 2/4 = 1/2
8. F1cat = 6/11
9. F1dog = 6/12 = 1/2
10. F1fox = 4/7

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| M e t r i c s | Classes | | | |
|  | Cat | Dog | Fox |
| Precision | 3/4 | 3/8 | 2/3 |
| Recall | 3/7 | 3/4 | 1/2 |
| F1 | 6/11 | 1/2 | 4/7 |