CS498 AML

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**Problem 1**

**Part A**

Naïve Bayes Classifier (20% of data for evaluation)

Accuracy: 0.7555556

|  |  |
| --- | --- |
| 1 | 0.725490196078431 |
| 2 | 0.745098039215686 |
| 3 | 0.751633986928105 |
| 4 | 0.77124183006536 |
| 5 | 0.738562091503268 |
| 6 | 0.777777777777778 |
| 7 | 0.803921568627451 |
| 8 | 0.77124183006536 |
| 9 | 0.758169934640523 |
| 10 | 0.810457516339869 |
| Average | 0.7653595 |

**Part B**

Naïve Bayes Classifier with NA values in missing values for attribute 3, 4, 6, 8

Accuracy: 0.7555556

|  |  |
| --- | --- |
| 1 | 0.758169934640523 |
| 2 | 0.73202614379085 |
| 3 | 0.797385620915033 |
| 4 | 0.797385620915033 |
| 5 | 0.718954248366013 |
| 6 | 0.73202614379085 |
| 7 | 0.718954248366013 |
| 8 | 0.77124183006536 |
| 9 | 0.725490196078431 |
| 10 | 0.803921568627451 |
| Average | 0.7555556 |

**Part C**

Naïve Bayes Classifier using caret and klaR library.

Accuracy: 0.7444444

|  |  |
| --- | --- |
| 1 | 0.712418300653595 |
| 2 | 0.73202614379085 |
| 3 | 0.738562091503268 |
| 4 | 0.764705882352941 |
| 5 | 0.745098039215686 |
| 6 | 0.69281045751634 |
| 7 | 0.784313725490196 |
| 8 | 0.751633986928105 |
| 9 | 0.790849673202614 |
| 10 | 0.73202614379085 |
| Average | 0.7444444 |

**Part D**

SVM Classifier

Accuracy: 0.7581699

The accuracy of Naïve Bayes Classifier and SVM classifier are around 75%.