**RESULTS OF NAÏVE BAYES IMPLEMENTED ON HAYES-ROTH DATASET**

**IN WEKA**

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=== Run information ===

Scheme: weka.classifiers.bayes.NaiveBayes

Relation: hayes-roth-weka.filters.unsupervised.attribute.NumericToNominal-Rfirst-last

Instances: 132

Attributes: 6

name

hobby

age

educational-level

marital-status

class

Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

Naive Bayes Classifier

Class

Attribute 1 2 3

(0.39) (0.39) (0.23)

=========================================

name

1 2.0 1.0 1.0

2 1.0 2.0 1.0

3 1.0 1.0 2.0

4 1.0 1.0 2.0

5 2.0 1.0 1.0

6 1.0 2.0 1.0

7 2.0 1.0 1.0

8 1.0 1.0 2.0

9 2.0 1.0 1.0

10 1.0 2.0 1.0

11 1.0 1.0 2.0

12 1.0 1.0 2.0

13 1.0 1.0 2.0

14 1.0 2.0 1.0

15 2.0 1.0 1.0

16 2.0 1.0 1.0

17 2.0 1.0 1.0

18 1.0 1.0 2.0

19 2.0 1.0 1.0

20 2.0 1.0 1.0

21 1.0 2.0 1.0

22 1.0 1.0 2.0

23 1.0 2.0 1.0

24 1.0 2.0 1.0

25 1.0 2.0 1.0

26 1.0 2.0 1.0

27 1.0 1.0 2.0

28 2.0 1.0 1.0

29 1.0 2.0 1.0

30 2.0 1.0 1.0

31 1.0 2.0 1.0

32 1.0 2.0 1.0

33 1.0 2.0 1.0

34 1.0 2.0 1.0

35 2.0 1.0 1.0

36 2.0 1.0 1.0

37 1.0 2.0 1.0

38 1.0 1.0 2.0

39 1.0 2.0 1.0

40 2.0 1.0 1.0

41 1.0 2.0 1.0

42 2.0 1.0 1.0

43 1.0 1.0 2.0

44 1.0 1.0 2.0

45 2.0 1.0 1.0

46 1.0 1.0 2.0

47 1.0 1.0 2.0

48 1.0 1.0 2.0

49 1.0 2.0 1.0

50 2.0 1.0 1.0

51 2.0 1.0 1.0

52 1.0 2.0 1.0

53 1.0 2.0 1.0

54 2.0 1.0 1.0

55 1.0 1.0 2.0

56 1.0 2.0 1.0

57 2.0 1.0 1.0

58 1.0 2.0 1.0

59 2.0 1.0 1.0

60 1.0 2.0 1.0

61 1.0 1.0 2.0

62 1.0 2.0 1.0

63 1.0 2.0 1.0

64 1.0 1.0 2.0

65 1.0 2.0 1.0

66 2.0 1.0 1.0

67 2.0 1.0 1.0

68 2.0 1.0 1.0

69 2.0 1.0 1.0

70 1.0 2.0 1.0

71 1.0 2.0 1.0

72 1.0 1.0 2.0

73 1.0 2.0 1.0

74 2.0 1.0 1.0

75 1.0 1.0 2.0

76 1.0 2.0 1.0

77 1.0 2.0 1.0

78 1.0 2.0 1.0

79 1.0 2.0 1.0

80 1.0 2.0 1.0

81 2.0 1.0 1.0

82 1.0 2.0 1.0

83 1.0 1.0 2.0

84 1.0 2.0 1.0

85 1.0 2.0 1.0

86 1.0 2.0 1.0

87 1.0 1.0 2.0

88 1.0 2.0 1.0

89 2.0 1.0 1.0

90 1.0 2.0 1.0

91 2.0 1.0 1.0

92 2.0 1.0 1.0

93 2.0 1.0 1.0

94 2.0 1.0 1.0

95 2.0 1.0 1.0

96 2.0 1.0 1.0

97 2.0 1.0 1.0

98 1.0 2.0 1.0

99 1.0 2.0 1.0

100 1.0 1.0 2.0

101 1.0 1.0 2.0

102 1.0 1.0 2.0

103 2.0 1.0 1.0

104 1.0 2.0 1.0

105 2.0 1.0 1.0

106 2.0 1.0 1.0

107 1.0 1.0 2.0

108 2.0 1.0 1.0

109 1.0 2.0 1.0

110 1.0 1.0 2.0

111 1.0 2.0 1.0

112 2.0 1.0 1.0

113 1.0 2.0 1.0

114 2.0 1.0 1.0

115 1.0 2.0 1.0

116 1.0 2.0 1.0

117 1.0 2.0 1.0

118 2.0 1.0 1.0

119 2.0 1.0 1.0

120 2.0 1.0 1.0

121 2.0 1.0 1.0

122 1.0 1.0 2.0

123 2.0 1.0 1.0

124 1.0 2.0 1.0

125 1.0 1.0 2.0

126 2.0 1.0 1.0

127 2.0 1.0 1.0

128 1.0 1.0 2.0

129 1.0 2.0 1.0

130 2.0 1.0 1.0

131 2.0 1.0 1.0

132 2.0 1.0 1.0

[total] 183.0 183.0 162.0

hobby

1 18.0 18.0 11.0

2 18.0 18.0 11.0

3 18.0 18.0 11.0

[total] 54.0 54.0 33.0

age

1 29.0 16.0 8.0

2 16.0 29.0 8.0

3 9.0 9.0 5.0

4 1.0 1.0 13.0

[total] 55.0 55.0 34.0

educational-level

1 29.0 16.0 8.0

2 16.0 29.0 8.0

3 9.0 9.0 5.0

4 1.0 1.0 13.0

[total] 55.0 55.0 34.0

marital-status

1 29.0 16.0 8.0

2 16.0 29.0 8.0

3 9.0 9.0 5.0

4 1.0 1.0 13.0

[total] 55.0 55.0 34.0

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

Correctly Classified Instances 106 80.303 %

Incorrectly Classified Instances 26 19.697 %

Kappa statistic 0.6969

Mean absolute error 0.2835

Root mean squared error 0.3348

Relative absolute error 65.3963 %

Root relative squared error 71.9347 %

Total Number of Instances 132

=== Detailed Accuracy By Class ===

TP Rate FP Rate Precision Recall F-Measure MCC ROC Area PRC Area Class

0.745 0.160 0.745 0.745 0.745 0.585 0.920 0.891 1

0.745 0.160 0.745 0.745 0.745 0.585 0.923 0.893 2

1.000 0.000 1.000 1.000 1.000 1.000 1.000 1.000 3

Weighted Avg. 0.803 0.124 0.803 0.803 0.803 0.679 0.939 0.916

=== Confusion Matrix ===

a b c <-- classified as

38 13 0 | a = 1

13 38 0 | b = 2

0 0 30 | c = 3