**Appendix B: Naïve Bayes**

=== Run information ===

Scheme: weka.classifiers.bayes.NaiveBayes

Relation: selecteddata2-weka.filters.unsupervised.attribute.Reorder-R1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,19,20,21,22,23,24,25,26,18-weka.filters.unsupervised.attribute.Remove-R5-weka.filters.unsupervised.attribute.Remove-R10-weka.filters.unsupervised.attribute.NumericToNominal-Rfirst-last-weka.filters.unsupervised.attribute.Remove-R4-weka.filters.supervised.instance.ClassBalancer-num-intervals10-weka.filters.supervised.instance.ClassBalancer-num-intervals10

Instances: 25564

Attributes: 23

ecage26

ecsex99

marst26

pvreg25

dwtenr25

mortg25

multj28

alhrp28

yrxfte11

clwkr1

prmjb1

fllprt1

nocg2e6

imphwe1

uncoll1

n07c3g10

pubpv10

cqpc42

rppc42

udpd42

wgsal42

hleveg18

penpln1

Test mode: 10-fold cross-validation

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

Naive Bayes Classifier

Class

Attribute 1 2

(0.5) (0.5)

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

ecage26

16 12.098376313275232 17.379013312452233

17 5.439350525310093 46.49725920125621

18 15.427889207257799 99.27407987471327

19 47.61318051575595 163.88018794049728

20 65.37058261699632 182.07909162099995

21 73.13944603628897 177.52936570087428

22 96.44603629416694 204.82772122162828

23 118.6427889207174 234.85591229445768

24 121.97230181469996 252.14487079093522

25 173.02483285576656 248.50509005483468

26 208.53963705824773 230.30618637433201

27 215.19866284621295 243.95536413470901

28 262.921680993297 233.94596711043255

29 235.17574021010861 267.6139389193621

30 267.36103151860715 213.01722787785448

31 266.2511938872796 230.30618637433201

32 256.2626552053318 224.84651527018121

33 290.6676217764854 227.57635082225661

34 274.02005730657237 237.58574784653308

35 339.50047755489703 232.12607674238228

36 262.921680993297 235.76585747848281

……

390000 1.0 1.909945184025124

410000 1.0 1.909945184025124

420000 5.439350525310093 3.729835552075372

430000 3.2196752626550467 1.0

440000 1.0 1.909945184025124

450000 1.0 1.909945184025124

500000 1.0 1.909945184025124

525000 5.439350525310093 2.819890368050248

550000 2.1098376313275233 1.0

600000 1.0 1.909945184025124

625000 2.1098376313275233 1.0

650000 1.0 1.909945184025124

700000 2.1098376313275233 1.0

725000 1.0 2.819890368050248

750000 1.0 1.909945184025124

1350000 2.1098376313275233 2.819890368050248

1400000 1.0 1.909945184025124

[total] 13027.99999999924 13027.999999997686

hleveg18

1 29.85577841451559 52.8668754894321

2 12.098376313275232 23.748629600628092

3 133.07067812797524 394.0963194988517

4 362.8070678127753 814.4909945184502

5 246.27411652338398 557.8864526233706

6 1753.4336198661786 2219.4463586533616

7 730.1633237821899 944.6131558340402

8 505.97612225402753 573.3555207517974

9 4812.14613180487 4706.326546593979

10 381.6743075453434 243.95536413470901

11 2655.731614135466 1576.115113547532

12 1170.7688634192218 687.0986687549355

[total] 12793.999999999238 12793.999999997779

Time taken to build model: 0.03 seconds

=== Stratified cross-validation ===

=== Summary ===

Correctly Classified Instances 21091.7211 82.5056 %

Incorrectly Classified Instances 4472.2789 17.4944 %

Kappa statistic 0.6501

Mean absolute error 0.1836

Root mean squared error 0.376

Relative absolute error 36.7131 %

Root relative squared error 75.1968 %

Total Number of Instances 25564

=== Detailed Accuracy By Class ===

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

0.826 0.176 0.825 0.826 0.825 0.650 0.914 0.915 1

0.824 0.174 0.825 0.824 0.825 0.650 0.914 0.915 2

Weighted Avg. 0.825 0.175 0.825 0.825 0.825 0.650 0.914 0.915

=== Confusion Matrix ===

a b <-- classified as

10554.56 2227.44 | a = 1

2244.83 10537.17 | b = 2