**Time Domain – Alpha – Dominance**

**NaiveBayes classifier**

**- Filter:** Partition membership (Random Tree)

Correctly Classified Instances 890 69.5313 %

Incorrectly Classified Instances 390 30.4688 %

Kappa statistic 0.3851

Mean absolute error 0.3117

Root mean squared error 0.5285

Relative absolute error 64.4457 %

Root relative squared error 107.4862 %

Total Number of Instances 1280

=== Detailed Accuracy By Class ===

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

0,687 0,292 0,772 0,687 0,727 0,388 0,746 0,798 1

0,708 0,313 0,610 0,708 0,655 0,388 0,746 0,647 0

Weighted Avg. 0,695 0,301 0,706 0,695 0,698 0,388 0,746 0,736

=== Confusion Matrix ===

a b <-- classified as

519 237 | a = 1

153 371 | b = 0

**SVM(SMO) Classifier**

**- Filter:** Partition membership (Random Tree)

**- Classifier:** SMO(Sequential minimal optimization)

- **FilterType**: Standardize training data

- **Kernel:** PUK

Correctly Classified Instances 1248 97.5 %

Incorrectly Classified Instances 32 2.5 %

Kappa statistic 0.9488

Mean absolute error 0.025

Root mean squared error 0.1581

Relative absolute error 5.1695 %

Root relative squared error 32.1551 %

Total Number of Instances 1280

=== Detailed Accuracy By Class ===

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

0,958 0,000 1,000 0,958 0,978 0,950 0,979 0,983 1

1,000 0,042 0,942 1,000 0,970 0,950 0,979 0,942 0

Weighted Avg. 0,975 0,017 0,976 0,975 0,975 0,950 0,979 0,966

=== Confusion Matrix ===

a b <-- classified as

724 32 | a = 1

0 524 | b = 0

**İBK Classifier**

- **Filter:** Partition membership (Random Tree)

Correctly Classified Instances 1210 94.5313 %

Incorrectly Classified Instances 70 5.4688 %

Kappa statistic 0.8867

Mean absolute error 0.0542

Root mean squared error 0.23

Relative absolute error 11.21 %

Root relative squared error 46.7799 %

Total Number of Instances 1280

=== Detailed Accuracy By Class ===

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

0,958 0,073 0,950 0,958 0,954 0,887 0,967 0,969 1

0,927 0,042 0,938 0,927 0,933 0,887 0,967 0,950 0

Weighted Avg. 0,945 0,060 0,945 0,945 0,945 0,887 0,967 0,961

=== Confusion Matrix ===

a b <-- classified as

724 32 | a = 1

38 486 | b = 0

**RandomForest Classifier**

- **Filter:** Partition membership (Random Tree)

Correctly Classified Instances 1218 95.1563 %

Incorrectly Classified Instances 62 4.8438 %

Kappa statistic 0.8997

Mean absolute error 0.069

Root mean squared error 0.1862

Relative absolute error 14.2775 %

Root relative squared error 37.8754 %

Total Number of Instances 1280

=== Detailed Accuracy By Class ===

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

0,963 0,065 0,955 0,963 0,959 0,900 0,992 0,995 1

0,935 0,037 0,946 0,935 0,940 0,900 0,992 0,987 0

Weighted Avg. 0,952 0,053 0,952 0,952 0,952 0,900 0,992 0,992

=== Confusion Matrix ===

a b <-- classified as

728 28 | a = 1

34 490 | b = 0

**Time Domain – Beta – Arousal**

**NaiveBayes classifier**

**- Filter:** Partition membership (Random Tree)

Correctly Classified Instances 849 66.3281 %

Incorrectly Classified Instances 431 33.6719 %

Kappa statistic 0.3119

Mean absolute error 0.3391

Root mean squared error 0.545

Relative absolute error 70.1188 %

Root relative squared error 110.8317 %

Total Number of Instances 1280

=== Detailed Accuracy By Class ===

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

0,688 0,372 0,727 0,688 0,707 0,313 0,722 0,784 1

0,628 0,312 0,582 0,628 0,604 0,313 0,722 0,633 0

Weighted Avg. 0,663 0,348 0,668 0,663 0,665 0,313 0,722 0,722

=== Confusion Matrix ===

a b <-- classified as

520 236 | a = 1

195 329 | b = 0

**SVM(SMO) Classifier**

**- Filter:** Partition membership (Random Tree)

**- Classifier:** SMO(Sequential minimal optimization)

- **FilterType**: Standardize training data

- **Kernel:** PUK

Correctly Classified Instances 1239 96.7969 %

Incorrectly Classified Instances 41 3.2031 %

Kappa statistic 0.933

Mean absolute error 0.032

Root mean squared error 0.179

Relative absolute error 6.6234 %

Root relative squared error 36.3971 %

Total Number of Instances 1280

=== Detailed Accuracy By Class ===

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

1,000 0,078 0,949 1,000 0,974 0,935 0,961 0,949 1

0,922 0,000 1,000 0,922 0,959 0,935 0,961 0,954 0

Weighted Avg. 0,968 0,046 0,970 0,968 0,968 0,935 0,961 0,951

=== Confusion Matrix ===

a b <-- classified as

756 0 | a = 1

41 483 | b = 0

**İBK Classifier**

- **Filter:** Partition membership (Random Tree)

Correctly Classified Instances 1217 95.0781 %

Incorrectly Classified Instances 63 4.9219 %

Kappa statistic 0.8978

Mean absolute error 0.0485

Root mean squared error 0.217

Relative absolute error 10.0197 %

Root relative squared error 44.1265 %

Total Number of Instances 1280

=== Detailed Accuracy By Class ===

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

0,967 0,073 0,951 0,967 0,959 0,898 0,973 0,975 1

0,927 0,033 0,951 0,927 0,939 0,898 0,973 0,958 0

Weighted Avg. 0,951 0,056 0,951 0,951 0,951 0,898 0,973 0,968

=== Confusion Matrix ===

a b <-- classified as

731 25 | a = 1

38 486 | b = 0

**RandomForest Classifier**

- **Filter:** Partition membership (Random Tree)

Correctly Classified Instances 1224 95.625 %

Incorrectly Classified Instances 56 4.375 %

Kappa statistic 0.9092

Mean absolute error 0.066

Root mean squared error 0.178

Relative absolute error 13.6491 %

Root relative squared error 36.1965 %

Total Number of Instances 1280

=== Detailed Accuracy By Class ===

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

0,972 0,067 0,955 0,972 0,963 0,909 0,994 0,996 1

0,933 0,028 0,959 0,933 0,946 0,909 0,994 0,991 0

Weighted Avg. 0,956 0,051 0,956 0,956 0,956 0,909 0,994 0,994

=== Confusion Matrix ===

a b <-- classified as

735 21 | a = 1

35 489 | b = 0

**Time Domain – Gamma – Dominance**

**NaiveBayes classifier**

**- Filter:** Partition membership (Random Tree)

Correctly Classified Instances 862 67.3438 %

Incorrectly Classified Instances 418 32.6563 %

Kappa statistic 0.3363

Mean absolute error 0.3267

Root mean squared error 0.532

Relative absolute error 67.5653 %

Root relative squared error 108.2011 %

Total Number of Instances 1280

=== Detailed Accuracy By Class ===

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

0,684 0,342 0,743 0,684 0,712 0,338 0,737 0,816 1

0,658 0,316 0,591 0,658 0,623 0,338 0,737 0,607 0

Weighted Avg. 0,673 0,331 0,681 0,673 0,676 0,338 0,737 0,731

=== Confusion Matrix ===

a b <-- classified as

517 239 | a = 1

179 345 | b = 0

**SVM(SMO) Classifier**

**- Filter:** Partition membership (Random Tree)

**- Classifier:** SMO(Sequential minimal optimization)

- **FilterType**: Standardize training data

- **Kernel:** PUK

Correctly Classified Instances 1245 97.2656 %

Incorrectly Classified Instances 35 2.7344 %

Kappa statistic 0.9439

Mean absolute error 0.0273

Root mean squared error 0.1654

Relative absolute error 5.6541 %

Root relative squared error 33.6286 %

Total Number of Instances 1280

=== Detailed Accuracy By Class ===

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

0,960 0,010 0,993 0,960 0,976 0,945 0,975 0,977 1

0,990 0,040 0,945 0,990 0,967 0,945 0,975 0,940 0

Weighted Avg. 0,973 0,022 0,974 0,973 0,973 0,945 0,975 0,962

=== Confusion Matrix ===

a b <-- classified as

726 30 | a = 1

5 519 | b = 0

**İBK Classifier**

- **Filter:** Partition membership (Random Tree)

Correctly Classified Instances 1220 95.3125 %

Incorrectly Classified Instances 60 4.6875 %

Kappa statistic 0.9031

Mean absolute error 0.0467

Root mean squared error 0.2149

Relative absolute error 9.6511 %

Root relative squared error 43.6935 %

Total Number of Instances 1280

=== Detailed Accuracy By Class ===

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

0,960 0,057 0,960 0,960 0,960 0,903 0,965 0,972 1

0,943 0,040 0,943 0,943 0,943 0,903 0,965 0,938 0

Weighted Avg. 0,953 0,050 0,953 0,953 0,953 0,903 0,965 0,958

=== Confusion Matrix ===

a b <-- classified as

726 30 | a = 1

30 494 | b = 0

**RandomForest Classifier**

- **Filter:** Partition membership (Random Tree)

Correctly Classified Instances 1223 95.5469 %

Incorrectly Classified Instances 57 4.4531 %

Kappa statistic 0.9079

Mean absolute error 0.0623

Root mean squared error 0.1769

Relative absolute error 12.8769 %

Root relative squared error 35.9688 %

Total Number of Instances 1280

=== Detailed Accuracy By Class ===

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

0,962 0,053 0,963 0,962 0,962 0,908 0,994 0,996 1

0,947 0,038 0,945 0,947 0,946 0,908 0,994 0,991 0

Weighted Avg. 0,955 0,047 0,955 0,955 0,955 0,908 0,994 0,994

=== Confusion Matrix ===

a b <-- classified as

727 29 | a = 1

28 496 | b = 0