Supplementary material for the paper titled "Early classification of time series by simultaneously optimizing the accuracy and earliness"

Raw results for the RelClass method

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Dataset	$\tau = 0.001$	$\tau = 0.1$	$\tau = 0.5$	$\tau = 0.9$
50words	0.65	0.65	0.66	0.66
Adiac	0.62	0.63	0.63	0.64
Beef	0.40	0.40	0.57	0.67
CBF	0.35	0.46	0.64	0.87
ChlorineConcentration	0.82	0.82	0.82	0.82
CinC_ECG_torso	0.80	0.84	0.85	0.86
Coffee	0.71	0.89	0.89	0.89
Cricket_X	0.60	0.62	0.61	0.61
Cricket_Y	0.65	0.68	0.68	0.68
Cricket_Z	0.66	0.66	0.66	0.66
DiatomSizeReduction	0.94	0.94	0.94	0.94
ECG200	0.88	0.89	0.89	0.89
ECGFiveDays	0.57	0.51	0.52	0.77
FaceAll	0.69	0.69	0.69	0.69
FaceFour	0.84	0.83	0.83	0.86
FacesUCR	0.76	0.76	0.77	0.77
fish	0.80	0.79	0.79	0.79
Gun_Point	0.91	0.91	0.91	0.91
Haptics	0.30	0.41	0.41	0.40
InlineSkate	0.25	0.28	0.27	0.27
ItalyPowerDemand	0.67	0.79	0.85	0.95
Lighting2	0.62	0.64	0.62	0.67
Lighting7	0.70	0.68	0.68	0.67
MALLAT	0.44	0.70	0.73	0.80
MedicalImages	0.65	0.67	0.67	0.68
MoteStrain	0.58	0.58	0.58	0.58
OliveOil	0.43	0.80	0.77	0.83
OSULeaf	0.49	0.49	0.48	0.48
SonyAIBORobotSurface	0.81	0.79	0.79	0.78
SonyAIBORobotSurfaceII	0.87	0.88	0.88	0.88
StarLightCurves	0.94	0.95	0.95	0.95
SwedhLeaf	0.84	0.83	0.83	0.83
Symbols	0.47	0.67	0.71	0.79
synthetic_control	0.84	0.97	0.98	0.98
Trace	0.76	0.84	0.86	0.86
TwoLeadECG	0.73	0.72	0.72	0.72
Two_Patterns	0.93	0.93	0.93	0.93
uWaveGestureLibrary_X	0.75	0.75	0.75	0.75
uWaveGestureLibrary_Y	0.60	0.67	0.68	0.68
uWaveGestureLibrary_Z	0.71	0.71	0.71	0.71
wafer	0.97	0.99	0.99	1.00
WordsSynonyms	0.64	0.65	0.65	0.65
yoga	0.82	0.83	0.83	0.83
NonInvasiveFatalECG_Thorax1	0.87	0.87	0.87	0.87
NonInvasiveFatalECG_Thorax2	0.88	0.88	0.88	0.88

Table 1: Accuracy values for the Rel.Class method using the Gaussian Naive Bayes box method and various reliability parameter values (τ).

Dataset	$\tau = 0.001$	$\tau = 0.1$	$\tau = 0.5$	$\tau = 0.9$
50words	0.64	0.65	0.65	0.65
Adiac	0.63	0.63	0.64	0.64
Beef	0.40	0.40	0.60	0.67
CBF	0.35	0.42	0.75	0.86
ChlorineConcentration	0.82	0.82	0.82	0.82
CinC_ECG_torso	0.80	0.84	0.85	0.85
Coffee	0.71	0.89	0.89	0.89
Cricket_X	0.60	0.62	0.61	0.61
Cricket_Y	0.64	0.68	0.68	0.68
Cricket_Z	0.66	0.66	0.66	0.66
DiatomSizeReduction	0.94	0.94	0.94	0.94
ECG200	0.84	0.89	0.89	0.89
ECGFiveDays	0.57	0.51	0.69	0.77
FaceAll	0.69	0.69	0.69	0.69
FaceFour	0.86	0.82	0.82	0.85
FacesUCR	0.76	0.77	0.77	0.77
fish	0.79	0.80	0.79	0.79
Gun_Point	0.91	0.91	0.91	0.91
Haptics	0.30	0.41	0.41	0.40
InlineSkate	0.25	0.27	0.28	0.27
ItalyPowerDemand	0.68	0.79	0.92	0.95
Lighting2	0.59	0.62	0.66	0.70
Lighting7	0.66	0.70	0.70	0.68
MALLAT	0.43	0.67	0.73	0.78
MedicalImages	0.64	0.66	0.67	0.67
MoteStrain	0.85	0.86	0.86	0.86
OliveOil	0.43	0.77	0.77	0.83
OSULeaf	0.50	0.49	0.49	0.48
SonyAIBORobotSurface	0.79	0.77	0.77	0.78
SonyAIBORobotSurfaceII	0.87	0.87	0.88	0.87
StarLightCurves	0.95	0.95	0.95	0.95
SwedhLeaf	0.84	0.84	0.83	0.83
Symbols	0.46	0.66	0.72	0.77
synthetic_control	0.76	0.95	0.98	0.98
Trace	0.83	0.85	0.86	0.86
TwoLeadECG	0.93	0.93	0.93	0.93
Two_Patterns	0.68	0.68	0.68	0.68
uWaveGestureLibrary_X	0.75	0.75	0.75	0.75
uWaveGestureLibrary_Y	0.57	0.67	0.68	0.68
uWaveGestureLibrary_Z	0.70	0.71	0.71	0.71
wafer	0.93	0.99	0.99	0.99
WordsSynonyms	0.65	0.65	0.65	0.65
yoga	0.82	0.83	0.83	0.83
NonInvasiveFatalECG_Thorax1	0.87	0.87	0.87	0.87
NonInvasiveFatalECG_Thorax2	0.88	0.88	0.88	0.88

Table 2: Accuracy values for the Rel.Class method using the Naive Gaussian Quadratic set method and various reliability parameter values (τ).

Dataset	$\tau = 0.001$	$\tau = 0.1$	$\tau = 0.5$	$\tau = 0.9$
50words	84.95	90.79	92.20	95.45
Adiac	91.20	95.41	96.04	98.03
Beef	0.21	7.30	25.70	71.97
CBF	0.80	6.71	23.08	52.02
ChlorineConcentration	96.02	97.29	97.59	98.32
CinC_ECG_torso	45.96	54.12	56.58	64.62
Coffee	5.53	30.96	38.44	63.72
Cricket_X	62.71	76.01	78.68	84.86
Cricket_Y	67.90	79.99	82.36	87.90
Cricket_Z	72.05	78.57	80.36	84.60
DiatomSizeReduction	25.35	31.64	33.49	40.59
ECG200	41.71	63.70	68.81	84.77
ECGFiveDays	0.74	1.63	15.84	73.24
FaceAll	92.33	95.54	96.27	97.92
FaceFour	24.58	31.25	34.22	45.14
FacesUCR	82.89	90.80	92.71	96.65
fish	75.39	83.34	85.42	90.51
Gun_Point	62.14	69.42	71.33	79.67
Haptics	2.12	43.45	57.89	78.91
InlineSkate	72.41	85.10	87.31	92.70
ItalyPowerDemand	5.09	27.10	35.92	64.19
Lighting2	37.91	57.89	61.16	71.89
Lighting7	76.65	83.74	85.23	89.72
MALLAT	13.97	35.92	44.01	67.43
MedicalImages	75.04	86.64	88.96	93.78
MoteStrain	82.72	89.36	90.94	95.49
OliveOil	0.33	12.09	18.76	43.18
OSULeaf	93.58	96.44	97.10	98.48
SonyAIBORobotSurface	36.51	53.54	57.70	76.59
SonyAIBORobotSurfaceII	50.97	66.97	70.86	80.31
StarLightCurves	85.08	88.86	90.02	93.59
SwedhLeaf	84.96	90.57	91.96	95.44
Symbols	10.08	38.18	45.82	61.85
synthetic_control	37.66	65.83	71.54	85.11
Trace	49.98	71.31	77.82	86.32
TwoLeadECG	73.63	81.40	83.63	89.57
Two_Patterns	86.87	90.72	91.82	94.80
uWaveGestureLibrary_X	78.92	88.04	90.09	94.90
uWaveGestureLibrary_Y	56.14	77.86	81.96	90.58
uWaveGestureLibrary_Z	77.26	89.46	91.80	96.39
wafer	12.65	25.48	30.75	49.60
WordsSynonyms	85.48	90.19	91.40	94.60
yoga	78.67	85.62	87.28	91.65
NonInvasiveFatalECG_Thorax1	89.39	92.59	93.47	95.95
NonInvasiveFatalECG_Thorax2	86.97	91.06	92.16	95.33

Table 3: Earliness values for the Rel.Class method using the Gaussian Naive Bayes box method and various reliability parameter values (τ).

Dataset	$\tau = 0.001$	$\tau = 0.1$	$\tau = 0.5$	$\tau = 0.9$
50words	79.86	86.65	89.57	91.69
Adiac	90.69	94.19	95.71	96.78
Beef	0.21	1.28	52.60	70.97
CBF	0.80	3.58	31.96	48.62
ChlorineConcentration	95.32	96.71	97.31	97.72
CinC_ECG_torso	45.83	52.34	56.35	59.56
Coffee	5.11	29.65	40.33	56.58
Cricket_X	59.08	74.00	79.90	83.28
Cricket_Y	64.54	78.50	83.33	86.15
Cricket_Z	71.33	78.81	81.84	84.12
DiatomSizeReduction	32.55	37.83	41.18	44.62
ECG200	32.05	52.97	63.93	70.99
ECGFiveDays	0.74	1.63	51.60	73.24
FaceAll	86.81	91.15	93.39	94.87
FaceFour	24.80	30.84	34.50	38.68
FacesUCR	77.09	85.69	89.70	92.62
fish	70.00	76.30	80.72	83.84
Gun_Point	65.77	71.61	75.16	78.94
Haptics	1.13	38.26	63.69	75.47
InlineSkate	69.62	81.95	87.52	90.29
ItalyPowerDemand	5.24	28.27	50.10	64.97
Lighting2	21.72	51.78	60.27	65.90
Lighting7	72.92	78.75	82.63	84.75
MALLAT	12.77	29.81	44.22	58.14
MedicalImages	67.68	80.85	86.61	90.07
MoteStrain	46.08	58.12	65.68	72.28
OliveOil	0.32	9.45	20.30	35.96
OSULeaf	90.76	94.64	96.31	97.37
SonyAIBORobotSurface	53.76	68.75	77.19	83.59
SonyAIBORobotSurfaceII	53.00	66.80	73.18	77.43
StarLightCurves	88.61	91.88	93.51	94.55
SwedhLeaf	80.83	87.09	90.08	92.34
Symbols	10.56	33.50	47.67	56.93
synthetic_control	26.62	58.81	69.79	78.01
Trace	57.23	75.53	82.09	85.10
TwoLeadECG	84.65	88.83	90.86	92.34
Two_Patterns	72.53	79.55	83.24	86.16
uWaveGestureLibrary_X	72.93	84.75	89.00	91.95
uWaveGestureLibrary_Y	48.61	73.48	82.07	87.02
uWaveGestureLibrary_Z	70.19	86.21	91.29	94.18
wafer	11.94	23.67	28.27	33.49
WordsSynonyms	82.15	87.13	89.61	91.39
yoga	78.41	84.42	87.30	89.22
NonInvasiveFatalECG_Thorax1	85.98	89.23	90.88	92.35
NonInvasiveFatalECG_Thorax2	82.59	87.04	89.39	91.35

Table 4: Earliness values for the Rel.Class method using the Naive Gaussian Quadratic set method and various reliability parameter values (τ).