Appendix A Results per training algorithms, with and without resampling strategies

Tables 1-12 show the mean and standard deviation of the F1-score and SERA metrics per regression algorithms. The best results are highlighted in bold.

Table 1: Mean and standard deviation of the **F1-score** metric obtained for each dataset considering **Bagging** technique. The best results are highlighted in bold.

	None	SMT	RO	RU	GN	SG	WERCS
Dataset				F1-score			
rabe_265	0.097 (0.183)	0.063 (0.122)	**0.183 (0.252)**	0.079 (0.141)	0.173 (0.190)	0.088 (0.177)	0.162 (0.286)
wine-quality	0.085 (0.012)	0.091 (0.016)	0.096 (0.010)	0.097 (0.020)	0.046 (0.020)	**0.132 (0.012)**	0.129 (0.019)
analcat-apnea3	0.317 (0.245)	0.345 (0.211)	0.400 (0.190)	0.329 (0.232)	**0.404 (0.215)**	0.361 (0.215)	0.394 (0.206)
cocomo_numeric	**2e-05 (0.000)**	**2e-05 (0.000)**	**2e-05 (0.000)**	**2e-05 (0.000)**	**2e-05 (0.000)**	**2e-05 (0.000)**	**2e-05 (0.000)**
abalone	0.738 (0.025)	0.732 (0.024)	0.738 (0.016)	0.730 (0.020)	0.724 (0.026)	0.721 (0.023)	**0.740 (0.019)**
a3	**1e-05 (0.000)**	**1e-05 (0.000)**	**1e-05 (0.000)**	**1e-05 (0.000)**	**1e-05 (0.000)**	**1e-05 (0.000)**	**1e-05 (0.000)**
forestFires	0.021 (0.066)	0.059 (0.114)	0.109 (0.139)	0.136 (0.167)	0.129 (0.122)	**0.182 (0.173)**	0.145 (0.170)
sleuth_case1202	**2e-05 (0.000)**	**2e-05 (0.000)**	**2e-05 (0.000)**	**2e-05 (0.000)**	**2e-05 (0.000)**	**2e-05 (0.000)**	**2e-05 (0.000)**
a1	**2e-05 (0.000)**	**2e-05 (0.000)**	**2e-05 (0.000)**	**2e-05 (0.000)**	**2e-05 (0.000)**	**2e-05 (0.000)**	**2e-05 (0.000)**
a7	0.066 (0.137)	0.178 (0.219)	0.297 (0.174)	0.295 (0.171)	0.300 (0.218)	**0.326 (0.152)**	0.302 (0.168)
kidney	1e-05 (0.000)	0.094 (0.234)	0.103 (0.258)	1e-05 (0.000)	0.067 (0.211)	**0.200 (0.315)**	0.061 (0.196)
boston	0.811 (0.039)	0.815 (0.038)	**0.844 (0.037)**	0.804 (0.041)	0.793 (0.052)	0.835 (0.027)	0.836 (0.034)
sensory	2e-05 (0.000)	0.543 (0.079)	0.658 (0.165)	0.061 (0.189)	0.497 (0.230)	0.617 (0.054)	**0.672 (0.179)**
a2	**1e-05 (0.000)**	**1e-05 (0.000)**	**1e-05 (0.000)**	**1e-05 (0.000)**	**1e-05 (0.000)**	**1e-05 (0.000)**	**1e-05 (0.000)**
triazines	2e-05 (0.000)	0.187 (0.312)	0.222 (0.337)	2e-05 (0.000)	2e-05 (0.000)	0.223 (0.250)	**0.353 (0.367)**
kdd_coil_1	**0.036 (0.162)**	2e-05 (0.000)	2e-05 (0.000)	2e-05 (0.000)	2e-05 (0.000)	2e-05 (0.000)	2e-05 (0.000)
mortgage	0.976 (0.008)	0.975 (0.008)	0.976 (0.008)	0.968 (0.008)	0.975 (0.008)	0.968 (0.010)	**0.978 (0.008)**
treasury	0.975 (0.007)	0.976 (0.008)	0.977 (0.007)	0.968 (0.006)	0.972 (0.008)	0.973 (0.007)	**0.981 (0.007)**
debutanizer	0.756 (0.025)	0.809 (0.033)	**0.837 (0.035)**	0.726 (0.046)	0.784 (0.048)	0.686 (0.042)	0.816 (0.033)
fuelCons	0.886 (0.032)	0.863 (0.032)	**0.922 (0.025)**	0.873 (0.034)	0.862 (0.032)	0.901 (0.025)	0.913 (0.023)
heat	0.963 (0.006)	**0.973 (0.004)**	0.972 (0.004)	0.957 (0.007)	0.971 (0.004)	0.966 (0.004)	0.969 (0.004)
california	0.916 (0.010)	0.855 (0.011)	0.913 (0.009)	0.911 (0.009)	0.816 (0.014)	0.892 (0.012)	**0.920 (0.010)**
cpuSm	0.932 (0.045)	0.939 (0.036)	**0.942 (0.031)**	0.139 (0.249)	0.929 (0.059)	0.807 (0.279)	0.769 (0.333)
compactiv	0.963 (0.004)	**0.965 (0.003)**	**0.965 (0.004)**	0.962 (0.004)	**0.965 (0.003)**	0.962 (0.004)	0.962 (0.004)
availPwr	0.947 (0.009)	0.920 (0.016)	**0.960 (0.009)**	0.935 (0.011)	0.909 (0.015)	0.946 (0.013)	0.950 (0.009)
maxTorq	0.968 (0.013)	0.946 (0.014)	0.975 (0.012)	0.956 (0.016)	0.954 (0.018)	0.964 (0.013)	**0.976 (0.011)**
space-ga	0.694 (0.243)	0.748 (0.033)	0.756 (0.031)	0.762 (0.058)	0.712 (0.037)	0.724 (0.028)	**0.782 (0.028)**
ConcrStr	0.404 (0.459)	**0.808 (0.071)**	0.805 (0.285)	0.176 (0.294)	0.724 (0.255)	0.719 (0.163)	0.759 (0.331)
acceleration	0.934 (0.021)	0.927 (0.026)	**0.951 (0.017)**	0.927 (0.023)	0.925 (0.025)	0.942 (0.015)	0.947 (0.020)
airfoild	0.488 (0.078)	0.584 (0.120)	**0.916 (0.026)**	0.424 (0.045)	0.517 (0.085)	0.435 (0.038)	0.514 (0.091)

Table 2: Mean and standard deviation of the **F1-score** metric obtained for each dataset considering **Decision Tree** technique. The best results are highlighted in bold.

	None	SMT	RO	RU	GN	SG	WERCS
Dataset				F1-score			
rabe-265	0.215 (0.299)	**0.216 (0.299)**	0.166 (0.233)	0.171 (0.226)	0.088 (0.140)	0.145 (0.205)	0.149 (0.220)
wine-quality	0.209 (0.028)	0.214 (0.033)	0.280 (0.032)	0.228 (0.025)	0.096 (0.021)	0.296 (0.031)	**0.418 (0.029)**
analcat-apnea3	0.297 (0.254)	0.383 (0.220)	0.428 (0.195)	0.358 (0.243)	0.387 (0.170)	0.425 (0.183)	**0.442 (0.192)**
cocomo_numeric	**0.603 (0.410)**	0.602 (0.410)	0.601 (0.409)	0.041 (0.181)	0.592 (0.404)	0.088 (0.273)	**0.603 (0.410)**
abalone	**0.718 (0.014)**	0.691 (0.015)	0.707 (0.016)	0.711 (0.022)	0.688 (0.021)	0.695 (0.027)	0.703 (0.015)
a3	1e-05 (0.000)	1e-05 (0.000)	1e-05 (0.000)	**0.013 (0.040)**	1e-05 (0.000)	0.010 (0.045)	1e-05 (0.000)
forestFires	0.056 (0.108)	0.109 (0.117)	0.098 (0.121)	0.121 (0.144)	0.128 (0.152)	0.189 (0.170)	**0.215 (0.261)**
sleuth_case1202	**0.736 (0.327)**	**0.736 (0.327)**	0.734 (0.328)	2e-05 (0.000)	0.665 (0.353)	0.526 (0.408)	0.551 (0.423)
a1	**0.359 (0.377)**	0.241 (0.317)	0.313 (0.339)	0.091 (0.223)	0.085 (0.212)	0.321 (0.311)	2e-05 (0.000)
a7	0.190 (0.203)	0.284 (0.240)	0.296 (0.193)	0.275 (0.183)	**0.350 (0.211)**	0.311 (0.167)	0.338 (0.193)
kidney	1e-05 (0.000)	0.051 (0.164)	0.121 (0.255)	0.029 (0.130)	**0.197 (0.326)**	0.187 (0.310)	0.170 (0.303)
boston	0.841 (0.055)	0.829 (0.059)	0.830 (0.063)	0.820 (0.052)	0.818 (0.058)	0.822 (0.056)	**0.844 (0.056)**
sensory	0.396 (0.343)	0.505 (0.111)	0.630 (0.079)	0.579 (0.061)	0.593 (0.094)	0.636 (0.085)	**0.652 (0.060)**
a2	**1e-05 (0.000)**	**1e-05 (0.000)**	**1e-05 (0.000)**	**1e-05 (0.000)**	**1e-05 (0.000)**	**1e-05 (0.000)**	**1e-05 (0.000)**
triazines	0.325 (0.384)	0.590 (0.352)	0.584 (0.300)	0.101 (0.251)	0.325 (0.384)	0.435 (0.260)	**0.660 (0.238)**
kdd_coil_1	**0.533 (0.374)**	0.382 (0.402)	0.317 (0.372)	0.066 (0.208)	0.373 (0.395)	0.350 (0.400)	0.103 (0.257)
mortgage	**0.980 (0.005)**	**0.980 (0.005)**	**0.980 (0.005)**	0.971 (0.013)	0.968 (0.010)	0.975 (0.007)	0.979 (0.008)
treasury	0.978 (0.009)	0.978 (0.010)	**0.979 (0.008)**	0.974 (0.008)	0.968 (0.017)	0.975 (0.009)	0.973 (0.009)
debutanizer	0.812 (0.034)	0.854 (0.043)	0.858 (0.036)	0.779 (0.032)	**0.869 (0.023)**	0.735 (0.039)	0.830 (0.025)
fuelCons	0.897 (0.022)	0.870 (0.032)	**0.917 (0.023)**	0.879 (0.035)	0.870 (0.034)	0.888 (0.022)	0.912 (0.026)
heat	0.962 (0.005)	**0.973 (0.003)**	0.970 (0.003)	0.957 (0.006)	0.972 (0.003)	0.965 (0.003)	0.968 (0.004)
california	**0.906 (0.008)**	0.833 (0.011)	**0.906 (0.009)**	0.897 (0.009)	0.813 (0.013)	0.892 (0.011)	0.894 (0.011)
cpuSm	**0.958 (0.023)**	**0.958 (0.027)**	**0.958 (0.027)**	0.439 (0.450)	0.951 (0.025)	0.945 (0.024)	0.936 (0.030)
compactiv	**0.956 (0.004)**	0.949 (0.009)	0.955 (0.005)	0.953 (0.006)	0.955 (0.005)	0.954 (0.006)	0.942 (0.007)
availPwr	0.959 (0.007)	0.922 (0.014)	**0.972 (0.008)**	0.944 (0.016)	0.930 (0.030)	0.957 (0.007)	0.959 (0.009)
maxTorq	0.975 (0.013)	0.956 (0.017)	**0.982 (0.008)**	0.967 (0.011)	0.939 (0.023)	0.973 (0.010)	0.978 (0.010)
space-ga	0.727 (0.038)	0.718 (0.026)	0.697 (0.031)	0.735 (0.052)	0.700 (0.036)	0.675 (0.036)	**0.737 (0.033)**
ConcrStr	0.898 (0.053)	0.842 (0.068)	**0.905 (0.053)**	0.878 (0.077)	0.848 (0.055)	0.883 (0.071)	0.904 (0.044)
acceleration	0.931 (0.021)	0.927 (0.026)	**0.951 (0.017)**	0.919 (0.037)	0.923 (0.027)	0.941 (0.021)	0.945 (0.016)
airfoild	0.926 (0.024)	0.899 (0.040)	**0.928 (0.021)**	0.850 (0.078)	0.926 (0.024)	0.828 (0.076)	0.926 (0.024)

Table 3: Mean and standard deviation of the **F1-score** metric obtained for each dataset considering **MLP** technique. The best results are highlighted in bold.

	None	SMT	RO	RU	GN	SG	WERCS
Dataset				F1-score			
rabe-265	0.051 (0.104)	0.024 (0.065)	0.044 (0.139)	0.069 (0.164)	0.041 (0.089)	**0.079 (0.166)**	0.037 (0.096)
wine-quality	0.115 (0.025)	0.116 (0.034)	**0.143 (0.045)**	0.085 (0.032)	0.035 (0.026)	0.120 (0.035)	0.105 (0.035)
analcat-apnea3	0.313 (0.234)	0.339 (0.205)	0.379 (0.188)	0.361 (0.208)	0.380 (0.175)	**0.400 (0.180)**	0.379 (0.208)
cocomo_numeric	0.555 (0.433)	0.478 (0.447)	0.559 (0.426)	0.571 (0.433)	0.558 (0.429)	**0.596 (0.407)**	0.531 (0.419)
abalone	0.407 (0.280)	0.406 (0.277)	0.396 (0.276)	0.354 (0.197)	0.400 (0.142)	**0.603 (0.069)**	0.525 (0.192)
a3	0.023 (0.060)	**0.034 (0.084)**	0.021 (0.048)	0.031 (0.070)	0.018 (0.052)	0.029 (0.077)	0.012 (0.039)
forestFires	0.061 (0.114)	0.040 (0.100)	0.060 (0.133)	0.087 (0.138)	0.099 (0.148)	**0.188 (0.197)**	0.061 (0.136)
sleuth_case1202	0.104 (0.187)	0.061 (0.180)	**0.168 (0.274)**	0.126 (0.253)	0.164 (0.226)	0.134 (0.262)	0.133 (0.234)
a1	0.454 (0.231)	0.528 (0.184)	0.528 (0.188)	0.510 (0.197)	0.452 (0.239)	**0.553 (0.221)**	0.349 (0.194)
a7	0.087 (0.097)	0.102 (0.098)	0.120 (0.104)	0.091 (0.105)	0.088 (0.132)	0.116 (0.111)	**0.138 (0.109)**
kidney	0.097 (0.191)	0.109 (0.203)	0.091 (0.180)	0.058 (0.119)	**0.141 (0.258)**	0.135 (0.215)	0.092 (0.160)
boston	0.210 (0.103)	**0.330 (0.086)**	0.314 (0.076)	0.168 (0.103)	0.276 (0.102)	0.271 (0.130)	0.264 (0.117)
sensory	0.028 (0.124)	0.423 (0.089)	0.523 (0.156)	0.468 (0.072)	0.474 (0.070)	**0.525 (0.079)**	0.491 (0.136)
a2	0.010 (0.043)	0.011 (0.048)	0.015 (0.048)	0.019 (0.059)	0.015 (0.049)	**0.025 (0.078)**	0.010 (0.034)
triazines	0.324 (0.193)	**0.452 (0.212)**	0.434 (0.211)	0.329 (0.197)	0.321 (0.224)	0.376 (0.230)	0.387 (0.126)
kdd_coil_1	0.167 (0.306)	0.223 (0.323)	0.294 (0.344)	**0.319 (0.245)**	0.313 (0.303)	0.242 (0.307)	0.222 (0.293)
mortgage	0.546 (0.274)	0.549 (0.354)	0.621 (0.307)	0.520 (0.279)	0.654 (0.287)	0.616 (0.305)	**0.726 (0.193)**
treasury	0.512 (0.304)	0.632 (0.344)	0.681 (0.274)	0.403 (0.347)	**0.727 (0.283)**	0.724 (0.203)	0.646 (0.274)
debutanizer	0.450 (0.205)	0.567 (0.049)	**0.574 (0.050)**	0.387 (0.236)	0.550 (0.045)	0.557 (0.047)	0.536 (0.044)
fuelCons	0.306 (0.137)	0.392 (0.150)	0.340 (0.149)	0.274 (0.157)	**0.453 (0.145)**	0.381 (0.176)	0.405 (0.167)
heat	0.652 (0.345)	0.779 (0.272)	0.693 (0.312)	0.672 (0.310)	0.771 (0.202)	0.747 (0.214)	**0.785 (0.190)**
california	**0.766 (0.035)**	0.742 (0.026)	0.765 (0.053)	0.732 (0.041)	0.687 (0.041)	0.749 (0.047)	0.758 (0.034)
cpuSm	0.502 (0.128)	0.670 (0.167)	**0.720 (0.127)**	0.493 (0.248)	0.639 (0.176)	0.606 (0.193)	0.670 (0.156)
compactiv	0.343 (0.173)	0.307 (0.133)	0.198 (0.197)	0.311 (0.127)	0.304 (0.130)	0.380 (0.135)	**0.395 (0.174)**
availPwr	0.733 (0.321)	0.836 (0.033)	**0.883 (0.023)**	0.830 (0.056)	0.833 (0.053)	0.860 (0.032)	0.880 (0.021)
maxTorq	0.679 (0.201)	0.727 (0.189)	**0.755 (0.132)**	0.545 (0.323)	0.697 (0.180)	0.743 (0.142)	0.712 (0.195)
space-ga	0.191 (0.205)	0.255 (0.212)	0.222 (0.220)	0.151 (0.125)	0.189 (0.150)	**0.300 (0.174)**	0.266 (0.173)
ConcrStr	0.433 (0.410)	0.778 (0.101)	0.562 (0.383)	0.563 (0.383)	0.792 (0.084)	**0.807 (0.070)**	0.709 (0.259)
acceleration	0.376 (0.082)	0.365 (0.210)	0.384 (0.170)	0.347 (0.065)	0.405 (0.064)	0.388 (0.068)	**0.408 (0.082)**
airfoild	0.247 (0.033)	0.127 (0.038)	0.130 (0.023)	0.243 (0.035)	0.252 (0.037)	**0.291 (0.030)**	0.217 (0.036)

Table 4: Mean and standard deviation of the **F1-score** metric obtained for each dataset considering **RF** technique. The best results are highlighted in bold.

	None	SMT	RO	RU	GN	SG	WERCS
Dataset				F1-score			
rabe-265	0.081 (0.138)	0.101 (0.165)	0.100 (0.171)	0.114 (0.166)	0.147 (0.255)	0.135 (0.220)	**0.152 (0.215)**
wine-quality	0.113 (0.017)	0.116 (0.017)	0.169 (0.024)	0.146 (0.025)	0.069 (0.041)	0.164 (0.018)	**0.254 (0.027)**
analcat-apnea3	0.426 (0.195)	0.444 (0.170)	0.394 (0.187)	0.428 (0.194)	0.423 (0.158)	**0.448 (0.166)**	0.400 (0.207)
cocomo_numeric	0.394 (0.451)	0.391 (0.448)	**0.433 (0.449)**	0.372 (0.429)	0.392 (0.450)	0.374 (0.399)	0.395 (0.453)
abalone	0.744 (0.020)	0.742 (0.020)	0.744 (0.020)	0.742 (0.020)	0.740 (0.022)	0.735 (0.021)	**0.751 (0.019)**
a3	**1e-05 (0.000)**	**1e-05 (0.000)**	**1e-05 (0.000)**	**1e-05 (0.000)**	**1e-05 (0.000)**	**1e-05 (0.000)**	**1e-05 (0.000)**
forestFires	0.091 (0.152)	0.108 (0.176)	0.115 (0.177)	0.195 (0.206)	0.116 (0.165)	**0.225 (0.205)**	0.137 (0.169)
sleuth_case1202	**0.636 (0.430)**	0.589 (0.446)	0.499 (0.465)	0.044 (0.195)	0.505 (0.470)	0.586 (0.444)	0.473 (0.444)
a1	**2e-05 (0.000)**	**2e-05 (0.000)**	**2e-05 (0.000)**	**2e-05 (0.000)**	**2e-05 (0.000)**	**2e-05 (0.000)**	**2e-05 (0.000)**
a7	0.125 (0.165)	0.177 (0.188)	0.184 (0.178)	0.325 (0.177)	0.217 (0.187)	**0.342 (0.171)**	0.322 (0.179)
kidney	1e-05 (0.000)	0.157 (0.324)	0.209 (0.374)	0.182 (0.326)	0.168 (0.345)	**0.226 (0.362)**	0.224 (0.398)
boston	0.834 (0.035)	0.843 (0.033)	0.845 (0.031)	0.832 (0.035)	0.831 (0.032)	**0.850 (0.035)**	0.847 (0.033)
sensory	0.218 (0.311)	0.393 (0.306)	0.508 (0.309)	0.672 (0.063)	0.410 (0.330)	0.673 (0.061)	**0.677 (0.173)**
a2	**1e-05 (0.000)**	**1e-05 (0.000)**	**1e-05 (0.000)**	**1e-05 (0.000)**	**1e-05 (0.000)**	**1e-05 (0.000)**	**1e-05 (0.000)**
triazines	2e-05 (0.000)	0.041 (0.185)	0.073 (0.191)	0.009 (0.042)	0.041 (0.184)	0.052 (0.141)	**0.159 (0.289)**
kdd_coil_1	**2e-05 (0.000)**	**2e-05 (0.000)**	**2e-05 (0.000)**	**2e-05 (0.000)**	**2e-05 (0.000)**	**2e-05 (0.000)**	**2e-05 (0.000)**
mortgage	**0.990 (0.003)**	**0.990 (0.003)**	**0.990 (0.003)**	0.987 (0.004)	0.985 (0.014)	0.987 (0.004)	0.989 (0.004)
treasury	**0.986 (0.005)**	**0.986 (0.005)**	**0.986 (0.005)**	0.985 (0.006)	**0.986 (0.005)**	0.985 (0.005)	0.985 (0.006)
debutanizer	0.854 (0.026)	**0.885 (0.031)**	0.878 (0.024)	0.844 (0.029)	0.878 (0.039)	0.780 (0.039)	0.880 (0.017)
fuelCons	0.932 (0.019)	0.913 (0.019)	0.945 (0.017)	0.929 (0.019)	0.924 (0.024)	0.938 (0.015)	**0.946 (0.018)**
heat	0.988 (0.002)	**0.990 (0.002)**	0.988 (0.002)	0.982 (0.004)	0.984 (0.003)	0.986 (0.003)	0.987 (0.002)
california	**0.925 (0.008)**	0.877 (0.022)	0.923 (0.008)	0.918 (0.008)	0.912 (0.030)	0.903 (0.008)	0.919 (0.010)
cpuSm	0.900 (0.056)	0.903 (0.053)	**0.915 (0.040)**	0.877 (0.061)	0.899 (0.047)	0.877 (0.055)	0.822 (0.202)
compactiv	**0.965 (0.003)**	**0.965 (0.003)**	**0.965 (0.003)**	0.964 (0.003)	**0.965 (0.003)**	0.963 (0.003)	0.964 (0.004)
availPwr	0.976 (0.007)	0.957 (0.030)	**0.980 (0.007)**	0.968 (0.008)	0.970 (0.016)	0.971 (0.008)	0.978 (0.006)
maxTorq	0.981 (0.009)	0.973 (0.012)	0.983 (0.009)	0.967 (0.014)	0.980 (0.010)	0.972 (0.012)	**0.986 (0.008)**
space-ga	**0.802 (0.042)**	0.786 (0.048)	0.775 (0.044)	0.794 (0.044)	0.740 (0.047)	0.740 (0.033)	0.796 (0.040)
ConcrStr	0.795 (0.344)	0.792 (0.278)	0.798 (0.346)	0.788 (0.341)	0.761 (0.336)	**0.872 (0.211)**	0.837 (0.289)
acceleration	0.956 (0.016)	0.952 (0.019)	0.964 (0.014)	0.950 (0.018)	0.954 (0.019)	0.959 (0.013)	**0.965 (0.015)**
airfoild	0.952 (0.016)	0.951 (0.016)	**0.962 (0.014)**	0.935 (0.021)	0.952 (0.015)	0.925 (0.033)	0.951 (0.015)

Table 5: Mean and standard deviation of the **F1-score** metric obtained for each dataset considering **SVM** technique. The best results are highlighted in bold.

	None	SMT	RO	RU	GN	SG	WERCS
Dataset				F1-score			
rabe-265	2e-05 (0.000)	0.040 (0.178)	0.019 (0.060)	0.126 (0.232)	**0.148 (0.234)**	0.119 (0.193)	0.038 (0.093)
wine-quality	0.103 (0.014)	0.100 (0.012)	0.112 (0.015)	0.111 (0.024)	0.054 (0.017)	**0.148 (0.014)**	0.097 (0.013)
analcat-apnea3	0.248 (0.060)	**0.257 (0.064)**	0.240 (0.085)	0.199 (0.119)	0.199 (0.121)	0.228 (0.100)	0.253 (0.063)
cocomo_numeric	**0.636 (0.429)**	0.607 (0.412)	0.601 (0.411)	0.504 (0.429)	0.448 (0.422)	0.497 (0.424)	**0.636 (0.429)**
abalone	**0.605 (0.028)**	0.572 (0.028)	0.479 (0.037)	0.562 (0.026)	0.538 (0.029)	0.554 (0.036)	0.532 (0.034)
a3	1e-05 (0.000)	0.019 (0.086)	1e-05 (0.000)	0.016 (0.072)	**0.044 (0.139)**	0.024 (0.109)	1e-05 (0.000)
forestFires	**0.211 (0.181)**	0.163 (0.146)	0.155 (0.125)	0.134 (0.173)	0.160 (0.150)	0.186 (0.171)	0.144 (0.153)
sleuth_case1202	**2e-05 (0.000)**	**2e-05 (0.000)**	**2e-05 (0.000)**	**2e-05 (0.000)**	**2e-05 (0.000)**	**2e-05 (0.000)**	**2e-05 (0.000)**
a1	2e-05 (0.000)	**0.013 (0.057)**	2e-05 (0.000)	2e-05 (0.000)	2e-05 (0.000)	2e-05 (0.000)	2e-05 (0.000)
a7	2e-05 (0.000)	2e-05 (0.000)	2e-05 (0.000)	2e-05 (0.000)	0.015 (0.067)	**0.314 (0.183)**	0.016 (0.072)
kidney	0.166 (0.342)	0.153 (0.283)	0.166 (0.342)	0.171 (0.353)	0.173 (0.356)	**0.224 (0.330)**	0.172 (0.354)
boston	2e-05 (0.000)	2e-05 (0.000)	2e-05 (0.000)	0.042 (0.130)	2e-05 (0.000)	**0.215 (0.205)**	2e-05 (0.000)
sensory	2e-05 (0.000)	0.588 (0.060)	0.593 (0.033)	0.515 (0.054)	**0.614 (0.069)**	0.569 (0.056)	0.575 (0.063)
a2	1e-05 (0.000)	1e-05 (0.000)	1e-05 (0.000)	1e-05 (0.000)	1e-05 (0.000)	**0.027 (0.120)**	1e-05 (0.000)
triazines	0.139 (0.293)	0.436 (0.237)	0.373 (0.240)	0.149 (0.241)	0.139 (0.293)	0.356 (0.245)	**0.473 (0.241)**
kdd_coil_1	0.193 (0.317)	**0.311 (0.237)**	2e-05 (0.000)	2e-05 (0.000)	0.040 (0.123)	0.258 (0.258)	0.014 (0.063)
mortgage	**0.967 (0.013)**	0.966 (0.013)	**0.967 (0.013)**	0.952 (0.016)	0.945 (0.019)	0.947 (0.016)	0.964 (0.014)
treasury	**0.967 (0.011)**	0.966 (0.011)	**0.967 (0.011)**	0.952 (0.017)	0.966 (0.010)	0.955 (0.014)	0.964 (0.014)
debutanizer	0.610 (0.044)	0.676 (0.044)	**0.679 (0.044)**	0.600 (0.050)	0.626 (0.043)	0.638 (0.050)	0.626 (0.045)
fuelCons	0.614 (0.212)	0.579 (0.252)	0.614 (0.212)	0.545 (0.281)	**0.622 (0.170)**	0.611 (0.212)	0.615 (0.212)
heat	0.997 (0.001)	0.993 (0.001)	**0.998 (0.000)**	0.991 (0.003)	0.994 (0.002)	0.992 (0.001)	0.996 (0.002)
california	**2e-05 (0.000)**	**2e-05 (0.000)**	**2e-05 (0.000)**	**2e-05 (0.000)**	**2e-05 (0.000)**	**2e-05 (0.000)**	**2e-05 (0.000)**
cpuSm	**0.314 (0.324)**	0.310 (0.320)	**0.314 (0.325)**	0.060 (0.186)	0.308 (0.294)	0.193 (0.277)	0.155 (0.276)
compactiv	2e-05 (0.000)	2e-05 (0.000)	2e-05 (0.000)	2e-05 (0.000)	2e-05 (0.000)	**0.241 (0.017)**	2e-05 (0.000)
availPwr	**0.966 (0.012)**	0.928 (0.023)	**0.966 (0.012)**	0.945 (0.021)	0.882 (0.029)	0.939 (0.021)	0.950 (0.017)
maxTorq	0.940 (0.039)	0.902 (0.045)	**0.941 (0.038)**	0.876 (0.047)	0.809 (0.043)	0.859 (0.062)	0.932 (0.036)
space-ga	**2e-05 (0.000)**	**2e-05 (0.000)**	**2e-05 (0.000)**	**2e-05 (0.000)**	**2e-05 (0.000)**	**2e-05 (0.000)**	**2e-05 (0.000)**
ConcrStr	0.797 (0.195)	**0.817 (0.045)**	0.797 (0.195)	0.718 (0.254)	0.765 (0.082)	0.711 (0.252)	0.751 (0.264)
acceleration	0.832 (0.054)	0.801 (0.059)	**0.835 (0.055)**	0.782 (0.057)	0.797 (0.064)	0.771 (0.066)	0.829 (0.055)
airfoild	2e-05 (0.000)	2e-05 (0.000)	2e-05 (0.000)	2e-05 (0.000)	2e-05 (0.000)	**0.345 (0.037)**	2e-05 (0.000)

Table 6: Mean and standard deviation of the **F1-score** metric obtained for each dataset considering **XG** technique. The best results are highlighted in bold.

	None	SMT	RO	RU	GN	SG	WERCS
Dataset				F1-score			
rabe-265	0.009 (0.040)	0.009 (0.040)	0.010 (0.043)	0.010 (0.046)	0.009 (0.040)	**0.020 (0.062)**	0.010 (0.043)
wine-quality	2e-05 (0.000)	2e-05 (0.000)	2e-05 (0.000)	2e-05 (0.000)	**0.011 (0.027)**	2e-05 (0.000)	2e-05 (0.000)
analcat-apnea3	0.150 (0.164)	0.235 (0.174)	0.236 (0.143)	0.273 (0.179)	0.161 (0.164)	**0.308 (0.218)**	0.274 (0.175)
cocomo_numeric	0.664 (0.400)	**0.667 (0.401)**	**0.667 (0.401)**	2e-05 (0.000)	0.649 (0.393)	0.616 (0.423)	0.664 (0.400)
abalone	0.521 (0.016)	0.532 (0.017)	0.505 (0.015)	0.545 (0.018)	**0.560 (0.019)**	0.540 (0.019)	0.532 (0.017)
a3	**1e-05 (0.000)**	**1e-05 (0.000)**	**1e-05 (0.000)**	**1e-05 (0.000)**	**1e-05 (0.000)**	**1e-05 (0.000)**	**1e-05 (0.000)**
forestFires	0.060 (0.138)	0.066 (0.137)	0.098 (0.161)	0.107 (0.178)	0.062 (0.155)	**0.165 (0.237)**	0.084 (0.156)
sleuth_case1202	0.678 (0.406)	0.715 (0.372)	0.726 (0.378)	0.317 (0.444)	0.723 (0.374)	0.720 (0.379)	**0.727 (0.377)**
a1	2e-05 (0.000)	2e-05 (0.000)	**0.077 (0.237)**	2e-05 (0.000)	2e-05 (0.000)	0.069 (0.220)	2e-05 (0.000)
a7	0.018 (0.080)	0.077 (0.142)	0.065 (0.134)	0.105 (0.188)	0.118 (0.194)	**0.284 (0.184)**	0.129 (0.217)
kidney	**1e-05 (0.000)**	**1e-05 (0.000)**	**1e-05 (0.000)**	**1e-05 (0.000)**	**1e-05 (0.000)**	**1e-05 (0.000)**	**1e-05 (0.000)**
boston	0.648 (0.058)	**0.655 (0.052)**	0.654 (0.057)	0.644 (0.057)	0.651 (0.055)	0.652 (0.057)	0.620 (0.055)
sensory	0.104 (0.021)	0.109 (0.029)	0.078 (0.017)	0.105 (0.022)	**0.130 (0.034)**	0.081 (0.019)	0.090 (0.020)
a2	**1e-05 (0.000)**	**1e-05 (0.000)**	**1e-05 (0.000)**	**1e-05 (0.000)**	**1e-05 (0.000)**	**1e-05 (0.000)**	**1e-05 (0.000)**
triazines	2e-05 (0.000)	2e-05 (0.000)	2e-05 (0.000)	2e-05 (0.000)	2e-05 (0.000)	0.043 (0.155)	**0.164 (0.313)**
kdd_coil_1	2e-05 (0.000)	2e-05 (0.000)	0.037 (0.167)	2e-05 (0.000)	2e-05 (0.000)	**0.167 (0.343)**	0.038 (0.171)
mortgage	0.674 (0.012)	0.675 (0.012)	**0.676 (0.012)**	0.673 (0.012)	0.674 (0.012)	0.675 (0.014)	0.674 (0.015)
treasury	0.652 (0.017)	0.652 (0.017)	0.652 (0.017)	**0.655 (0.021)**	0.652 (0.018)	0.653 (0.017)	0.652 (0.017)
debutanizer	0.743 (0.031)	**0.753 (0.032)**	0.747 (0.041)	0.734 (0.041)	0.747 (0.036)	0.688 (0.042)	0.742 (0.034)
fuelCons	0.572 (0.042)	**0.582 (0.039)**	0.573 (0.039)	0.573 (0.042)	0.579 (0.038)	0.570 (0.039)	0.573 (0.037)
heat	0.934 (0.012)	0.937 (0.011)	**0.938 (0.011)**	0.933 (0.011)	0.936 (0.011)	0.935 (0.011)	0.930 (0.011)
california	0.866 (0.004)	0.858 (0.006)	0.858 (0.005)	**0.867 (0.005)**	0.858 (0.006)	0.863 (0.005)	0.853 (0.005)
cpuSm	0.810 (0.038)	0.802 (0.036)	0.803 (0.035)	**0.852 (0.056)**	0.802 (0.038)	0.803 (0.043)	0.816 (0.046)
compactiv	**0.489 (0.029)**	**0.489 (0.030)**	0.486 (0.029)	0.487 (0.029)	**0.489 (0.029)**	0.482 (0.028)	0.487 (0.029)
availPwr	0.678 (0.019)	0.691 (0.017)	0.680 (0.019)	0.687 (0.024)	**0.692 (0.017)**	0.685 (0.021)	0.683 (0.020)
maxTorq	0.690 (0.018)	0.693 (0.016)	0.692 (0.017)	**0.698 (0.019)**	0.694 (0.016)	**0.698 (0.019)**	0.691 (0.017)
space-ga	0.480 (0.036)	0.479 (0.035)	0.471 (0.031)	**0.510 (0.036)**	0.480 (0.036)	0.470 (0.031)	0.487 (0.032)
ConcrStr	0.808 (0.083)	**0.833 (0.077)**	0.827 (0.069)	0.810 (0.078)	0.825 (0.080)	0.821 (0.080)	0.813 (0.075)
acceleration	0.670 (0.031)	0.675 (0.028)	0.675 (0.028)	0.670 (0.030)	**0.678 (0.026)**	0.674 (0.029)	0.653 (0.028)
airfoild	0.377 (0.037)	0.378 (0.037)	**0.397 (0.042)**	0.388 (0.042)	0.377 (0.037)	0.391 (0.042)	0.377 (0.037)

Table 7: Mean and standard deviation of the **SERA** metric obtained for each dataset considering **BG** technique. The best results are highlighted in bold.

	None	SMT	RO	RU	GN	SG	WERCS
Dataset				F1-score			
rabe-265	4.27e+3 (7.95e+3)	4.41e+3 (7.91e+3)	4.52e+3 (7.66e+3)	4.40e+3 (7.04e+3)	**3.63e+3 (5.27e+3)**	4.49e+3 (7.82e+3)	4.31e+3 (7.65e+3)
wine-quality	1.03e+2 (1.53e+1)	1.09e+2 (1.64e+1)	1.19e+2 (1.78e+1)	8.19e+1 (1.46e+1)	1.57e+2 (1.85e+1)	1.32e+2 (2.60e+1)	**7.86e+1 (1.83e+1)**
analcat-apnea3	5.15e+7 (4.33e+7)	5.02e+7 (4.14e+7)	4.85e+7 (3.88e+7)	5.55e+7 (4.83e+7)	**4.54e+7 (3.97e+7)**	4.68e+7 (3.95e+7)	4.90e+7 (3.99e+7)
cocomo_numeric	5.87e+5 (1.06e+6)	4.61e+5 (9.33e+5)	3.88e+5 (6.96e+5)	2.40e+6 (1.59e+6)	4.33e+5 (6.79e+5)	7.91e+5 (8.52e+5)	**3.62e+5 (6.39e+5)**
abalone	1.35e+3 (2.87e+2)	1.30e+3 (2.45e+2)	1.18e+3 (2.59e+2)	1.28e+3 (2.83e+2)	1.36e+3 (2.25e+2)	1.39e+3 (2.67e+2)	**1.13e+3 (2.32e+2)**
a3	**5.60e+2 (4.76e+2)**	6.67e+2 (4.91e+2)	8.10e+2 (5.56e+2)	8.01e+2 (4.11e+2)	7.29e+2 (3.98e+2)	1.25e+3 (6.86e+2)	1.07e+3 (5.99e+2)
forestFires	**2.10e+5 (3.73e+5)**	2.11e+5 (3.68e+5)	2.81e+5 (3.74e+5)	2.17e+5 (3.51e+5)	2.66e+5 (3.39e+5)	3.19e+5 (3.32e+5)	2.52e+5 (3.64e+5)
sleuth_case1202	1.05e+4 (1.01e+4)	7.68e+3 (6.42e+3)	**6.75e+3 (4.39e+3)**	2.01e+4 (1.09e+4)	7.48e+3 (4.62e+3)	9.08e+3 (5.98e+3)	1.01e+4 (7.86e+3)
a1	**1.36e+3 (7.45e+2)**	1.52e+3 (7.18e+2)	1.76e+3 (9.21e+2)	1.37e+3 (6.80e+2)	2.23e+3 (1.19e+3)	2.38e+3 (1.13e+3)	2.69e+3 (9.42e+2)
a7	4.53e+2 (3.31e+2)	4.07e+2 (3.17e+2)	**3.30e+2 (1.82e+2)**	4.61e+2 (2.46e+2)	3.83e+2 (2.50e+2)	6.16e+2 (2.11e+2)	4.35e+2 (2.11e+2)
kidney	1.72e+0 (1.53e+0)	1.14e+0 (8.87e-01)	1.14e+0 (1.02e+0)	1.41e+0 (9.62e-01)	**1.09e+0 (7.99e-01)**	1.40e+0 (8.93e-01)	1.49e+0 (1.34e+0)
boston	5.08e+2 (2.01e+2)	4.73e+2 (2.06e+2)	**3.56e+2 (1.57e+2)**	5.20e+2 (2.80e+2)	5.50e+2 (2.94e+2)	3.64e+2 (1.67e+2)	3.75e+2 (1.67e+2)
sensory	1.73e+1 (3.81e+0)	2.84e+1 (1.02e+1)	**1.32e+1 (2.55e+0)**	2.26e+1 (5.57e+0)	2.01e+1 (5.30e+0)	2.31e+1 (6.54e+0)	1.41e+1 (3.36e+0)
a2	**9.82e+2 (1.52e+3)**	1.17e+3 (1.30e+3)	1.18e+3 (1.26e+3)	2.33e+3 (1.10e+3)	1.32e+3 (1.27e+3)	4.88e+3 (1.75e+3)	1.73e+3 (1.24e+3)
triazines	2.30e-01 (1.80e-01)	**1.68e-01 (7.80e-02)**	1.98e-01 (8.50e-02)	2.47e-01 (1.36e-01)	2.33e-01 (1.92e-01)	5.07e-01 (1.64e-01)	1.86e-01 (1.35e-01)
kdd_coil_1	**1.54e+3 (7.94e+2)**	2.08e+3 (9.81e+2)	1.93e+3 (8.35e+2)	5.81e+3 (2.80e+3)	2.15e+3 (1.06e+3)	2.39e+3 (1.26e+3)	2.31e+3 (8.01e+2)
mortgage	3.04e+0 (1.06e+0)	2.61e+0 (1.44e+0)	**1.45e+0 (5.38e-01)**	3.45e+0 (1.05e+0)	1.85e+0 (6.41e-01)	2.01e+0 (4.84e-01)	1.87e+0 (7.54e-01)
treasury	4.18e+0 (4.09e+0)	3.56e+0 (2.99e+0)	**2.98e+0 (2.33e+0)**	5.44e+0 (5.10e+0)	8.45e+0 (9.99e+0)	3.37e+0 (2.73e+0)	3.22e+0 (2.51e+0)
debutanizer	1.39e+0 (3.46e-01)	8.66e-01 (1.73e-01)	**7.30e-01 (1.91e-01)**	1.49e+0 (3.30e-01)	1.07e+0 (3.15e-01)	1.49e+0 (2.35e-01)	8.89e-01 (2.72e-01)
fuelCons	3.89e+1 (2.40e+1)	3.94e+1 (1.74e+1)	**2.59e+1 (1.76e+1)**	4.29e+1 (2.25e+1)	5.37e+1 (2.62e+1)	3.25e+1 (1.59e+1)	2.80e+1 (1.73e+1)
heat	1.11e+4 (2.96e+3)	4.06e+3 (5.94e+2)	**3.91e+3 (5.23e+2)**	1.24e+4 (3.16e+3)	5.61e+3 (2.77e+3)	5.86e+3 (8.45e+2)	6.38e+3 (1.19e+3)
california	2.10e+12 (2.13e+11)	3.62e+12 (3.36e+11)	**1.92e+12 (2.75e+11)**	2.12e+12 (2.24e+11)	4.88e+12 (4.29e+11)	2.72e+12 (2.82e+11)	2.45e+12 (2.47e+11)
cpuSm	9.62e+4 (1.83e+5)	4.52e+4 (1.08e+5)	**3.51e+4 (6.23e+4)**	1.30e+5 (2.44e+5)	3.90e+4 (7.11e+4)	4.30e+4 (8.49e+4)	4.43e+4 (9.54e+4)
compactiv	1.32e+3 (4.50e+2)	1.92e+3 (6.02e+2)	**1.30e+3 (8.26e+2)**	1.43e+3 (6.05e+2)	1.60e+3 (1.27e+3)	1.34e+3 (8.70e+2)	1.47e+3 (8.29e+2)
availPwr	1.19e+4 (5.47e+3)	3.46e+4 (1.36e+4)	**6.92e+3 (6.30e+3)**	1.31e+4 (6.61e+3)	3.82e+4 (1.32e+4)	8.56e+3 (5.59e+3)	9.05e+3 (4.73e+3)
maxTorq	3.36e+4 (3.04e+4)	8.48e+4 (3.32e+4)	**1.17e+4 (1.30e+4)**	3.58e+4 (2.64e+4)	7.03e+4 (4.75e+4)	1.46e+4 (1.40e+4)	1.70e+4 (1.99e+4)
space-ga	2.40e+0 (1.65e+0)	2.29e+0 (1.41e+0)	2.25e+0 (1.45e+0)	2.34e+0 (1.49e+0)	2.57e+0 (1.65e+0)	2.67e+0 (1.33e+0)	**2.05e+0 (1.42e+0)**
ConcrStr	1.73e+3 (6.44e+2)	2.14e+3 (6.69e+2)	**1.47e+3 (5.67e+2)**	1.61e+4 (2.29e+4)	2.44e+3 (8.13e+2)	1.57e+4 (1.99e+4)	1.67e+3 (5.12e+2)
acceleration	6.92e+1 (5.25e+1)	8.86e+1 (5.23e+1)	**5.18e+1 (3.83e+1)**	8.74e+1 (6.53e+1)	8.31e+1 (4.55e+1)	5.63e+1 (2.79e+1)	5.77e+1 (4.37e+1)
airfoild	2.99e+10 (1.10e+10)	2.03e+10 (1.43e+10)	**9.76e+8 (6.93e+8)**	4.16e+10 (1.29e+10)	2.70e+10 (1.09e+10)	3.73e+10 (8.93e+9)	1.36e+11 (4.60e+10)

Table 8: Mean and standard deviation of the **SERA** metric obtained for each dataset considering **DT** technique. The best results are highlighted in bold.

	None	SMT	RO	RU	GN	SG	WERCS
Dataset				F1-score			
rabe-265	4.23e+3 (7.24e+3)	**3.90e+3 (7.24e+3)**	4.95e+3 (7.46e+3)	4.64e+3 (7.06e+3)	4.45e+3 (6.65e+3)	4.96e+3 (6.63e+3)	4.58e+3 (7.29e+3)
wine-quality	1.12e+2 (1.59e+1)	1.18e+2 (2.07e+1)	1.17e+2 (1.88e+1)	**9.61e+1 (1.72e+1)**	3.30e+2 (4.65e+1)	1.69e+2 (2.96e+1)	1.18e+2 (2.47e+1)
analcat-apnea3	4.86e+7 (4.22e+7)	5.64e+7 (6.79e+7)	6.04e+7 (6.08e+7)	4.79e+7 (4.14e+7)	5.17e+7 (4.13e+7)	**4.48e+7 (5.20e+7)**	5.16e+7 (6.24e+7)
cocomo_numeric	3.99e+5 (7.02e+5)	4.82e+5 (9.48e+5)	2.48e+5 (3.91e+5)	3.97e+5 (7.39e+5)	3.98e+5 (5.89e+5)	**2.27e+5 (3.72e+5)**	3.99e+5 (7.02e+5)
abalone	1.49e+3 (2.92e+2)	1.51e+3 (3.22e+2)	1.52e+3 (3.25e+2)	**1.46e+3 (2.76e+2)**	1.80e+3 (3.11e+2)	1.74e+3 (2.73e+2)	1.55e+3 (2.95e+2)
a3	8.06e+2 (5.83e+2)	9.96e+2 (6.38e+2)	**8.04e+2 (6.53e+2)**	1.41e+3 (1.16e+3)	9.13e+2 (5.70e+2)	9.39e+2 (8.06e+2)	1.00e+3 (6.47e+2)
forestFires	**2.06e+5 (3.56e+5)**	2.46e+5 (3.65e+5)	2.44e+5 (3.30e+5)	4.01e+5 (4.97e+5)	3.85e+5 (4.06e+5)	3.98e+5 (4.10e+5)	2.71e+5 (3.85e+5)
sleuth_case1202	8.80e+3 (4.91e+3)	8.67e+3 (5.58e+3)	8.77e+3 (6.88e+3)	5.63e+4 (5.51e+4)	7.96e+3 (5.66e+3)	9.96e+3 (6.95e+3)	**7.28e+3 (4.49e+3)**
a1	**1.92e+3 (1.57e+3)**	2.35e+3 (2.08e+3)	2.29e+3 (2.00e+3)	1.95e+3 (1.37e+3)	2.72e+3 (1.54e+3)	2.83e+3 (2.31e+3)	4.53e+3 (2.54e+3)
a7	3.75e+2 (2.61e+2)	3.93e+2 (3.23e+2)	4.02e+2 (2.80e+2)	5.27e+2 (2.85e+2)	4.77e+2 (3.08e+2)	7.43e+2 (3.93e+2)	**3.50e+2 (2.50e+2)**
kidney	1.51e+0 (1.66e+0)	1.88e+0 (1.92e+0)	1.50e+0 (1.57e+0)	1.64e+0 (1.48e+0)	1.57e+0 (1.44e+0)	1.68e+0 (1.47e+0)	**1.38e+0 (1.22e+0)**
boston	5.13e+2 (2.58e+2)	5.55e+2 (3.07e+2)	5.77e+2 (3.33e+2)	5.40e+2 (2.62e+2)	6.41e+2 (3.06e+2)	5.74e+2 (3.21e+2)	**4.65e+2 (2.60e+2)**
sensory	**1.45e+1 (3.84e+0)**	3.82e+1 (3.13e+1)	1.67e+1 (4.69e+0)	2.88e+1 (7.95e+0)	2.00e+1 (5.39e+0)	1.55e+1 (4.05e+0)	1.65e+1 (4.22e+0)
a2	**1.09e+3 (1.47e+3)**	**1.09e+3 (1.37e+3)**	1.54e+3 (1.76e+3)	2.88e+3 (2.38e+3)	1.62e+3 (1.68e+3)	5.51e+3 (3.02e+3)	2.29e+3 (2.03e+3)
triazines	2.10e-01 (1.80e-01)	**1.42e-01 (8.30e-02)**	1.76e-01 (1.18e-01)	4.15e-01 (1.73e-01)	2.12e-01 (1.82e-01)	4.61e-01 (2.12e-01)	1.78e-01 (1.33e-01)
kdd_coil_1	**1.71e+3 (8.43e+2)**	2.68e+3 (2.08e+3)	3.36e+3 (2.81e+3)	5.41e+3 (3.17e+3)	3.15e+3 (2.74e+3)	2.58e+3 (1.83e+3)	3.30e+3 (1.78e+3)
mortgage	2.43e+0 (1.15e+0)	2.10e+0 (9.85e-01)	**1.66e+0 (7.35e-01)**	3.16e+0 (1.27e+0)	3.56e+0 (2.79e+0)	3.56e+0 (1.24e+0)	3.04e+0 (1.27e+0)
treasury	5.50e+0 (3.46e+0)	6.02e+0 (7.56e+0)	**4.01e+0 (3.05e+0)**	4.62e+0 (2.65e+0)	1.69e+1 (3.02e+1)	4.22e+0 (3.12e+0)	6.07e+0 (4.18e+0)
debutanizer	1.35e+0 (4.44e-01)	**8.50e-01 (3.63e-01)**	1.12e+0 (4.42e-01)	1.34e+0 (5.01e-01)	9.59e-01 (4.43e-01)	1.83e+0 (4.91e-01)	1.17e+0 (4.05e-01)
fuelCons	3.73e+1 (2.29e+1)	4.87e+1 (2.30e+1)	**3.34e+1 (2.27e+1)**	4.47e+1 (2.13e+1)	6.54e+1 (3.39e+1)	4.13e+1 (2.12e+1)	3.45e+1 (2.45e+1)
heat	1.16e+4 (2.37e+3)	**3.76e+3 (5.62e+2)**	4.05e+3 (5.73e+2)	1.31e+4 (2.61e+3)	3.93e+3 (4.81e+2)	6.17e+3 (6.86e+2)	6.09e+3 (9.34e+2)
california	**2.39e+12 (2.55e+11)**	5.52e+12 (5.37e+11)	2.70e+12 (3.59e+11)	2.53e+12 (3.06e+11)	6.71e+12 (7.51e+11)	3.65e+12 (3.32e+11)	2.98e+12 (3.71e+11)
cpuSm	3.45e+4 (4.76e+4)	3.79e+4 (9.16e+4)	3.14e+4 (5.36e+4)	3.49e+4 (4.72e+4)	3.06e+4 (4.84e+4)	**2.94e+4 (4.46e+4)**	3.03e+4 (4.87e+4)
compactiv	1.97e+3 (1.45e+3)	2.73e+3 (7.69e+2)	**1.74e+3 (1.89e+2)**	2.02e+3 (1.49e+3)	1.95e+3 (1.38e+3)	2.13e+3 (1.55e+3)	2.55e+3 (1.68e+3)
availPwr	8.87e+3 (3.79e+3)	4.46e+4 (1.57e+4)	**5.81e+3 (5.63e+3)**	1.01e+4 (4.80e+3)	4.35e+4 (3.75e+4)	8.51e+3 (7.67e+3)	9.77e+3 (7.56e+3)
maxTorq	2.31e+4 (2.54e+4)	7.91e+4 (4.87e+4)	**8.10e+3 (1.06e+4)**	1.94e+4 (1.59e+4)	9.81e+4 (4.57e+4)	1.82e+4 (3.15e+4)	1.34e+4 (1.86e+4)
space-ga	2.83e+0 (1.73e+0)	**2.67e+0 (1.42e+0)**	2.77e+0 (1.41e+0)	2.85e+0 (1.62e+0)	2.90e+0 (1.61e+0)	3.53e+0 (1.28e+0)	2.68e+0 (1.58e+0)
ConcrStr	1.75e+3 (1.14e+3)	2.14e+3 (1.12e+3)	1.53e+3 (6.53e+2)	2.09e+3 (1.05e+3)	2.45e+3 (1.07e+3)	1.96e+3 (7.60e+2)	**1.43e+3 (5.38e+2)**
acceleration	7.84e+1 (5.68e+1)	9.03e+1 (7.29e+1)	**5.24e+1 (3.27e+1)**	1.12e+2 (8.39e+1)	1.04e+2 (6.08e+1)	6.46e+1 (4.14e+1)	6.37e+1 (5.46e+1)
airfoild	**4.47e+8 (9.51e+7)**	2.17e+9 (3.68e+9)	4.94e+8 (1.52e+8)	6.02e+9 (7.31e+9)	**4.47e+8 (9.51e+7)**	8.40e+9 (9.12e+9)	**4.47e+8 (9.51e+7)**

Table 9: Mean and standard deviation of the **SERA** metric obtained for each dataset considering **MLP** technique. The best results are highlighted in bold.

	None	SMT	RO	RU	GN	SG	WERCS
Dataset				F1-score			
rabe-265	6.44e+4 (1.27e+5)	**4.76e+4 (1.09e+5)**	1.63e+5 (2.27e+5)	2.24e+5 (4.83e+5)	1.02e+5 (3.35e+5)	8.87e+4 (1.91e+5)	1.88e+5 (3.22e+5)
wine-quality	1.81e+2 (6.93e+1)	1.97e+2 (3.43e+1)	3.71e+2 (1.21e+2)	**1.16e+2 (6.39e+1)**	1.35e+2 (6.22e+1)	2.21e+2 (9.31e+1)	1.49e+2 (8.55e+1)
analcat-apnea3	5.78e+7 (4.48e+7)	5.59e+7 (5.78e+7)	5.31e+7 (4.80e+7)	5.41e+7 (4.83e+7)	5.44e+7 (5.69e+7)	6.36e+7 (6.44e+7)	**5.29e+7 (4.68e+7)**
cocomo_numeric	5.61e+4 (9.27e+4)	8.10e+4 (1.05e+5)	7.61e+4 (1.37e+5)	8.19e+4 (1.82e+5)	**4.74e+4 (8.38e+4)**	6.34e+4 (1.28e+5)	6.83e+4 (1.34e+5)
abalone	2.46e+3 (5.36e+2)	2.42e+3 (9.50e+2)	2.57e+3 (7.33e+2)	7.12e+3 (6.04e+3)	3.23e+3 (1.32e+3)	**2.00e+3 (5.12e+2)**	2.29e+3 (5.64e+2)
a3	1.05e+7 (2.74e+7)	**1.31e+5 (3.77e+5)**	4.51e+5 (8.65e+5)	2.74e+7 (7.06e+7)	2.17e+6 (5.49e+6)	1.85e+8 (6.32e+8)	2.40e+6 (6.80e+6)
forestFires	2.04e+5 (3.72e+5)	**1.99e+5 (3.52e+5)**	**1.99e+5 (3.59e+5)**	2.08e+5 (3.56e+5)	2.17e+5 (3.44e+5)	2.55e+5 (3.15e+5)	2.03e+5 (3.53e+5)
sleuth_case1202	4.47e+5 (6.19e+5)	**1.89e+5 (4.08e+5)**	2.81e+5 (5.39e+5)	1.23e+6 (2.34e+6)	1.51e+6 (2.59e+6)	8.01e+5 (1.37e+6)	2.31e+5 (3.21e+5)
a1	1.94e+7 (5.53e+7)	**1.30e+6 (2.98e+6)**	1.88e+6 (4.25e+6)	3.47e+7 (9.20e+7)	5.74e+7 (1.82e+8)	4.25e+6 (1.25e+7)	2.28e+8 (6.19e+8)
a7	1.58e+7 (4.85e+7)	2.32e+7 (7.55e+7)	**3.30e+5 (7.56e+5)**	1.15e+8 (2.13e+8)	3.46e+6 (1.22e+7)	1.23e+9 (5.15e+9)	3.91e+6 (1.22e+7)
kidney	6.12e+1 (1.77e+2)	**9.55e+0 (1.30e+1)**	2.65e+1 (6.04e+1)	6.65e+1 (2.14e+2)	3.83e+1 (7.18e+1)	7.40e+1 (1.70e+2)	6.68e+1 (1.59e+2)
boston	4.44e+5 (8.96e+5)	**9.49e+4 (2.58e+5)**	1.87e+5 (7.41e+5)	2.77e+6 (6.96e+6)	1.13e+6 (4.71e+6)	4.29e+5 (1.21e+6)	1.96e+5 (6.33e+5)
sensory	2.74e+1 (7.38e+0)	7.93e+1 (5.17e+1)	2.78e+1 (1.25e+1)	5.10e+1 (2.85e+1)	4.45e+1 (1.75e+1)	**2.60e+1 (7.87e+0)**	2.94e+1 (1.62e+1)
a2	4.62e+7 (1.20e+8)	7.59e+6 (3.35e+7)	**1.64e+5 (3.95e+5)**	1.75e+8 (7.73e+8)	8.73e+6 (3.87e+7)	4.64e+7 (1.04e+8)	8.14e+6 (1.66e+7)
triazines	1.01e+0 (1.23e+0)	**3.88e-01 (2.16e-01)**	3.90e-01 (1.70e-01)	5.63e-01 (3.66e-01)	8.82e-01 (1.14e+0)	1.09e+0 (2.11e+0)	5.34e-01 (2.33e-01)
kdd_coil_1	**1.81e+3 (1.04e+3)**	2.26e+3 (1.44e+3)	2.32e+3 (1.50e+3)	1.12e+4 (9.72e+3)	3.52e+3 (2.18e+3)	3.30e+3 (1.89e+3)	2.59e+3 (1.17e+3)
mortgage	8.37e+2 (1.91e+3)	6.88e+2 (1.43e+3)	6.22e+2 (1.19e+3)	9.71e+3 (4.04e+4)	**2.63e+2 (5.02e+2)**	5.20e+2 (8.02e+2)	3.40e+2 (7.35e+2)
treasury	5.03e+3 (2.00e+4)	2.91e+2 (4.92e+2)	2.44e+3 (7.07e+3)	4.43e+3 (1.38e+4)	7.59e+2 (1.77e+3)	**2.20e+2 (6.10e+2)**	7.93e+2 (1.48e+3)
debutanizer	3.79e+0 (4.88e-01)	3.54e+0 (6.13e-01)	**3.45e+0 (5.24e-01)**	3.74e+0 (5.28e-01)	3.90e+0 (5.44e-01)	3.97e+0 (6.07e-01)	3.62e+0 (6.71e-01)
fuelCons	7.11e+3 (1.38e+4)	1.73e+4 (6.61e+4)	4.75e+3 (1.35e+4)	3.87e+4 (1.53e+5)	1.79e+3 (2.49e+3)	4.08e+3 (1.05e+4)	**1.38e+3 (1.09e+3)**
heat	1.93e+5 (2.30e+5)	1.28e+5 (2.80e+5)	1.61e+5 (2.41e+5)	1.52e+5 (1.77e+5)	9.19e+4 (1.72e+5)	1.64e+5 (2.97e+5)	**8.97e+4 (1.51e+5)**
california	4.28e+12 (4.93e+11)	6.23e+12 (1.27e+12)	**4.18e+12 (9.55e+11)**	4.66e+12 (3.30e+11)	8.67e+12 (1.75e+12)	4.74e+12 (7.15e+11)	4.43e+12 (3.56e+11)
cpuSm	4.42e+5 (7.14e+5)	2.09e+5 (3.88e+5)	**6.40e+4 (1.09e+5)**	8.56e+5 (2.24e+6)	3.00e+5 (5.42e+5)	2.37e+5 (4.12e+5)	1.22e+5 (3.05e+5)
compactiv	1.43e+7 (3.86e+7)	5.22e+7 (1.81e+8)	**4.29e+5 (3.43e+5)**	2.34e+7 (8.53e+7)	4.93e+6 (9.92e+6)	1.11e+6 (1.20e+6)	4.15e+6 (1.56e+7)
availPwr	**9.91e+4 (1.45e+5)**	6.51e+6 (2.89e+7)	4.15e+6 (1.35e+7)	5.12e+5 (1.17e+6)	3.73e+6 (1.13e+7)	3.33e+6 (1.33e+7)	5.27e+5 (1.90e+6)
maxTorq	1.08e+6 (1.39e+6)	**3.09e+5 (3.25e+5)**	4.50e+5 (7.04e+5)	1.11e+6 (1.24e+6)	1.33e+6 (2.27e+6)	4.56e+5 (7.19e+5)	6.95e+5 (8.24e+5)
space-ga	1.13e+9 (4.95e+9)	1.44e+8 (6.44e+8)	4.38e+9 (1.96e+10)	7.71e+9 (2.47e+10)	4.25e+8 (1.39e+9)	3.03e+13 (1.35e+14)	**4.31e+7 (1.70e+8)**
ConcrStr	7.55e+3 (1.09e+4)	4.92e+3 (2.12e+3)	3.31e+3 (1.42e+3)	3.41e+3 (1.23e+3)	3.69e+3 (2.12e+3)	4.06e+3 (1.21e+3)	**3.22e+3 (9.60e+2)**
acceleration	5.79e+3 (4.17e+3)	**3.10e+3 (2.68e+3)**	6.02e+3 (1.25e+4)	2.81e+5 (8.02e+5)	1.39e+5 (6.03e+5)	1.17e+5 (4.90e+5)	4.35e+3 (2.78e+3)
airfoild	2.02e+11 (4.58e+10)	1.88e+11 (2.98e+10)	**1.87e+11 (2.82e+10)**	1.95e+11 (4.22e+10)	1.98e+11 (4.21e+10)	4.35e+11 (4.96e+10)	2.21e+11 (5.46e+10)

Table 10: Mean and standard deviation of the **SERA** metric obtained for each dataset considering **RF** technique. The best results are highlighted in bold.

	None	SMT	RO	RU	GN	SG	WERCS
Dataset				F1-score			
rabe-265	**3.94e+3 (7.01e+3)**	3.98e+3 (7.01e+3)	4.07e+3 (7.00e+3)	4.32e+3 (5.84e+3)	4.03e+3 (6.53e+3)	4.23e+3 (6.61e+3)	4.32e+3 (7.17e+3)
wine-quality	7.80e+1 (1.40e+1)	7.94e+1 (1.37e+1)	7.35e+1 (1.40e+1)	**6.07e+1 (1.27e+1)**	1.09e+2 (1.77e+1)	7.00e+1 (1.46e+1)	6.54e+1 (1.45e+1)
analcat-apnea3	3.87e+7 (2.93e+7)	4.55e+7 (4.09e+7)	4.63e+7 (4.10e+7)	3.76e+7 (2.83e+7)	4.12e+7 (2.96e+7)	**3.67e+7 (3.05e+7)**	4.17e+7 (3.37e+7)
cocomo_numeric	5.60e+5 (8.45e+5)	5.26e+5 (7.77e+5)	**4.51e+5 (6.46e+5)**	5.75e+5 (8.00e+5)	5.32e+5 (7.33e+5)	5.40e+5 (7.02e+5)	5.59e+5 (8.40e+5)
abalone	1.24e+3 (2.68e+2)	1.22e+3 (2.63e+2)	1.17e+3 (2.49e+2)	1.13e+3 (2.36e+2)	1.26e+3 (2.52e+2)	1.27e+3 (2.50e+2)	**1.09e+3 (2.28e+2)**
a3	**5.83e+2 (5.09e+2)**	6.26e+2 (5.01e+2)	6.40e+2 (5.29e+2)	8.90e+2 (4.63e+2)	6.74e+2 (4.81e+2)	9.55e+2 (3.81e+2)	7.30e+2 (4.21e+2)
forestFires	**2.12e+5 (3.69e+5)**	2.18e+5 (3.72e+5)	2.25e+5 (3.71e+5)	2.43e+5 (3.42e+5)	2.17e+5 (3.65e+5)	2.59e+5 (3.45e+5)	2.39e+5 (3.57e+5)
sleuth_case1202	6.77e+3 (4.95e+3)	**6.00e+3 (5.02e+3)**	6.56e+3 (4.16e+3)	1.62e+4 (1.51e+4)	6.40e+3 (4.60e+3)	6.50e+3 (5.99e+3)	6.87e+3 (4.89e+3)
a1	**1.31e+3 (7.18e+2)**	1.34e+3 (6.43e+2)	1.37e+3 (6.26e+2)	1.49e+3 (7.39e+2)	1.98e+3 (9.39e+2)	1.89e+3 (8.15e+2)	2.59e+3 (9.28e+2)
a7	3.80e+2 (2.69e+2)	3.77e+2 (2.64e+2)	**3.36e+2 (2.17e+2)**	3.88e+2 (2.12e+2)	3.65e+2 (2.37e+2)	4.31e+2 (1.79e+2)	3.50e+2 (1.77e+2)
kidney	8.12e-01 (6.81e-01)	6.62e-01 (4.37e-01)	**6.46e-01 (6.96e-01)**	8.46e-01 (6.43e-01)	7.14e-01 (6.18e-01)	9.74e-01 (7.46e-01)	8.00e-01 (5.73e-01)
boston	3.89e+2 (1.91e+2)	3.67e+2 (1.90e+2)	3.37e+2 (1.69e+2)	3.96e+2 (2.04e+2)	3.89e+2 (2.09e+2)	3.18e+2 (1.55e+2)	**3.05e+2 (1.34e+2)**
sensory	1.46e+1 (3.19e+0)	1.63e+1 (4.75e+0)	**1.39e+1 (3.21e+0)**	1.67e+1 (4.29e+0)	1.60e+1 (2.98e+0)	1.94e+1 (5.12e+0)	1.45e+1 (2.75e+0)
a2	**9.52e+2 (1.46e+3)**	9.96e+2 (1.42e+3)	9.94e+2 (1.44e+3)	2.15e+3 (1.22e+3)	9.80e+2 (1.30e+3)	3.64e+3 (1.50e+3)	1.54e+3 (1.25e+3)
triazines	2.12e-01 (1.76e-01)	2.03e-01 (1.54e-01)	2.02e-01 (1.51e-01)	3.92e-01 (1.04e-01)	2.11e-01 (1.74e-01)	4.24e-01 (1.60e-01)	**2.01e-01 (1.56e-01)**
kdd_coil_1	**1.34e+3 (6.70e+2)**	1.44e+3 (6.51e+2)	1.36e+3 (6.75e+2)	4.76e+3 (2.24e+3)	1.52e+3 (7.39e+2)	1.72e+3 (7.64e+2)	2.05e+3 (6.50e+2)
mortgage	7.74e-01 (3.66e-01)	8.27e-01 (3.77e-01)	**6.96e-01 (3.20e-01)**	8.84e-01 (3.53e-01)	5.03e+0 (1.20e+1)	8.45e-01 (3.40e-01)	7.26e-01 (3.17e-01)
treasury	2.50e+0 (2.94e+0)	2.53e+0 (3.37e+0)	2.37e+0 (2.87e+0)	2.57e+0 (3.06e+0)	2.40e+0 (2.94e+0)	**2.06e+0 (2.82e+0)**	2.62e+0 (2.91e+0)
debutanizer	6.63e-01 (2.39e-01)	**4.74e-01 (2.01e-01)**	5.07e-01 (2.01e-01)	6.86e-01 (2.13e-01)	5.62e-01 (2.68e-01)	9.30e-01 (2.23e-01)	5.33e-01 (2.30e-01)
fuelCons	1.74e+1 (1.26e+1)	1.95e+1 (1.24e+1)	1.46e+1 (9.90e+0)	1.98e+1 (1.14e+1)	2.06e+1 (1.59e+1)	1.74e+1 (1.02e+1)	**1.33e+1 (9.22e+0)**
heat	1.04e+3 (2.80e+2)	**6.28e+2 (2.13e+2)**	9.07e+2 (2.07e+2)	1.36e+3 (3.54e+2)	1.07e+3 (1.89e+2)	9.62e+2 (2.29e+2)	1.00e+3 (1.93e+2)
california	1.78e+12 (1.91e+11)	2.71e+12 (4.29e+11)	**1.74e+12 (1.94e+11)**	1.76e+12 (1.92e+11)	2.05e+12 (7.24e+11)	2.22e+12 (1.96e+11)	2.31e+12 (2.12e+11)
cpuSm	5.63e+4 (1.20e+5)	4.65e+4 (1.03e+5)	**3.36e+4 (8.05e+4)**	5.58e+4 (1.20e+5)	4.10e+4 (8.81e+4)	4.44e+4 (1.03e+5)	3.89e+4 (8.59e+4)
compactiv	1.15e+3 (3.59e+2)	1.46e+3 (6.62e+2)	**1.10e+3 (3.59e+2)**	1.17e+3 (3.80e+2)	1.15e+3 (3.62e+2)	1.11e+3 (4.20e+2)	1.20e+3 (3.51e+2)
availPwr	4.67e+3 (5.39e+3)	2.17e+4 (2.78e+4)	**4.34e+3 (5.63e+3)**	5.07e+3 (5.27e+3)	9.61e+3 (1.55e+4)	5.03e+3 (5.67e+3)	4.38e+3 (5.09e+3)
maxTorq	1.20e+4 (1.51e+4)	2.81e+4 (2.30e+4)	**1.02e+4 (1.60e+4)**	1.38e+4 (1.61e+4)	1.30e+4 (1.63e+4)	1.32e+4 (1.88e+4)	1.10e+4 (1.55e+4)
space-ga	2.17e+0 (1.62e+0)	2.14e+0 (1.56e+0)	2.10e+0 (1.45e+0)	2.16e+0 (1.57e+0)	2.31e+0 (1.56e+0)	2.49e+0 (1.56e+0)	**1.98e+0 (1.43e+0)**
ConcrStr	8.89e+2 (5.36e+2)	1.33e+3 (8.40e+2)	**8.53e+2 (5.52e+2)**	1.10e+3 (4.71e+2)	1.33e+3 (1.17e+3)	1.07e+3 (4.93e+2)	8.73e+2 (4.33e+2)
acceleration	3.32e+1 (2.24e+1)	3.77e+1 (2.20e+1)	2.82e+1 (1.76e+1)	4.03e+1 (2.42e+1)	3.43e+1 (2.35e+1)	3.38e+1 (2.21e+1)	**2.57e+1 (1.35e+1)**
airfoild	2.05e+8 (1.49e+8)	3.73e+8 (4.78e+8)	**1.32e+8 (6.70e+7)**	4.51e+8 (6.08e+8)	1.94e+8 (1.27e+8)	8.90e+8 (9.20e+8)	2.16e+8 (1.83e+8)

Table 11: Mean and standard deviation of the **SERA** metric obtained for each dataset considering **SVM** technique. The best results are highlighted in bold.

	None	SMT	RO	RU	GN	SG	WERCS
Dataset				F1-score			
rabe-265	4.84e+3 (8.19e+3)	4.88e+3 (8.17e+3)	4.45e+3 (7.84e+3)	**4.07e+3 (6.64e+3)**	4.27e+3 (6.54e+3)	4.12e+3 (5.91e+3)	4.85e+3 (7.61e+3)
wine-quality	1.37e+2 (2.13e+1)	1.37e+2 (2.15e+1)	1.66e+2 (4.05e+1)	**6.77e+1 (1.45e+1)**	3.79e+2 (4.75e+1)	3.54e+2 (5.31e+1)	1.42e+2 (3.39e+1)
analcat-apnea3	4.74e+8 (4.08e+8)	4.55e+8 (3.96e+8)	4.55e+8 (3.95e+8)	4.60e+8 (3.99e+8)	**4.39e+8 (3.85e+8)**	4.50e+8 (3.92e+8)	4.53e+8 (3.96e+8)
cocomo_numeric	1.07e+6 (1.87e+6)	6.50e+5 (1.22e+6)	7.59e+5 (1.49e+6)	9.12e+5 (1.65e+6)	**5.87e+5 (1.07e+6)**	6.55e+5 (1.23e+6)	1.07e+6 (1.87e+6)
abalone	2.52e+3 (4.20e+2)	**2.48e+3 (4.25e+2)**	3.11e+3 (4.60e+2)	2.61e+3 (4.05e+2)	2.76e+3 (3.78e+2)	2.66e+3 (4.11e+2)	2.69e+3 (4.02e+2)
a3	5.66e+2 (5.07e+2)	7.04e+2 (4.10e+2)	5.60e+2 (4.79e+2)	**5.59e+2 (4.85e+2)**	8.19e+2 (3.78e+2)	1.32e+3 (4.14e+2)	7.75e+2 (3.87e+2)
forestFires	2.09e+5 (3.80e+5)	2.08e+5 (3.71e+5)	2.45e+5 (3.81e+5)	**2.07e+5 (3.78e+5)**	2.17e+5 (3.53e+5)	2.11e+5 (3.58e+5)	2.13e+5 (3.56e+5)
sleuth_case1202	**2.89e+4 (1.85e+4)**	4.43e+4 (2.47e+4)	3.35e+4 (1.79e+4)	8.28e+4 (6.71e+4)	4.53e+4 (2.08e+4)	3.93e+4 (1.90e+4)	4.02e+4 (1.75e+4)
a1	**2.25e+3 (8.27e+2)**	4.57e+3 (2.12e+3)	2.46e+3 (7.65e+2)	2.39e+3 (1.07e+3)	6.42e+3 (2.00e+3)	4.90e+3 (1.48e+3)	4.65e+3 (1.19e+3)
a7	4.92e+2 (3.85e+2)	**4.39e+2 (2.93e+2)**	4.76e+2 (3.72e+2)	**4.39e+2 (3.02e+2)**	4.44e+2 (2.74e+2)	6.33e+2 (1.99e+2)	4.47e+2 (2.87e+2)
kidney	1.36e+0 (1.14e+0)	2.17e+0 (2.74e+0)	1.36e+0 (1.14e+0)	**1.27e+0 (8.08e-01)**	1.33e+0 (1.11e+0)	2.01e+0 (1.61e+0)	1.33e+0 (8.79e-01)
boston	3.66e+3 (8.02e+2)	3.72e+3 (7.82e+2)	3.64e+3 (7.79e+2)	4.82e+3 (1.41e+3)	4.83e+3 (9.41e+2)	5.39e+3 (1.77e+3)	**3.62e+3 (7.31e+2)**
sensory	2.14e+1 (5.39e+0)	2.28e+1 (6.21e+0)	1.97e+1 (5.08e+0)	4.14e+1 (1.42e+1)	**1.96e+1 (4.15e+0)**	2.37e+1 (5.76e+0)	2.16e+1 (6.47e+0)
a2	**1.04e+3 (1.44e+3)**	1.70e+3 (1.24e+3)	1.07e+3 (1.35e+3)	**1.04e+3 (1.37e+3)**	2.08e+3 (1.05e+3)	1.95e+3 (1.07e+3)	1.63e+3 (1.04e+3)
triazines	2.55e-01 (1.97e-01)	2.55e-01 (1.57e-01)	**2.22e-01 (1.27e-01)**	4.37e-01 (1.16e-01)	2.55e-01 (1.97e-01)	5.63e-01 (1.68e-01)	2.64e-01 (1.45e-01)
kdd_coil_1	**1.80e+3 (1.22e+3)**	3.71e+3 (1.63e+3)	2.42e+3 (8.03e+2)	1.06e+4 (3.46e+3)	3.88e+3 (1.02e+3)	3.16e+3 (1.79e+3)	5.35e+3 (9.42e+2)
mortgage	**2.04e+0 (1.14e+0)**	2.62e+0 (1.52e+0)	**2.04e+0 (1.14e+0)**	4.74e+0 (3.22e+0)	6.03e+0 (3.26e+0)	6.96e+0 (3.26e+0)	5.06e+0 (2.36e+0)
treasury	2.88e+0 (2.22e+0)	3.27e+0 (1.49e+0)	**2.87e+0 (2.22e+0)**	5.69e+0 (2.61e+0)	3.83e+0 (2.52e+0)	5.55e+0 (2.29e+0)	5.83e+0 (2.85e+0)
debutanizer	3.14e+0 (5.01e-01)	2.69e+0 (3.80e-01)	**2.68e+0 (3.81e-01)**	3.46e+0 (4.54e-01)	2.86e+0 (3.25e-01)	3.06e+0 (3.31e-01)	2.70e+0 (3.56e-01)
fuelCons	3.17e+2 (7.78e+1)	**3.16e+2 (7.42e+1)**	3.17e+2 (7.78e+1)	3.34e+2 (7.34e+1)	4.40e+2 (8.65e+1)	3.53e+2 (1.00e+2)	3.28e+2 (7.07e+1)
heat	1.19e+2 (6.93e+1)	5.99e+2 (1.31e+2)	**2.78e+1 (1.64e+1)**	2.98e+2 (1.62e+2)	4.42e+2 (2.59e+2)	8.42e+2 (1.94e+2)	2.09e+2 (5.35e+2)
california	**1.47e+13 (5.30e+11)**	4.11e+13 (1.30e+12)	4.09e+13 (1.30e+12)	**1.47e+13 (5.25e+11)**	4.41e+13 (1.41e+12)	4.14e+13 (1.33e+12)	**1.47e+13 (5.20e+11)**
cpuSm	3.57e+5 (5.38e+5)	3.45e+5 (4.89e+5)	**3.02e+5 (4.56e+5)**	3.77e+5 (4.56e+5)	3.51e+5 (4.43e+5)	3.55e+5 (4.20e+5)	3.51e+5 (4.85e+5)
compactiv	2.43e+5 (3.37e+4)	2.94e+5 (1.79e+4)	2.43e+5 (3.37e+4)	**2.38e+5 (3.09e+4)**	2.43e+5 (3.37e+4)	5.49e+5 (2.83e+4)	**2.38e+5 (3.03e+4)**
availPwr	**3.73e+4 (3.49e+4)**	7.05e+4 (3.88e+4)	**3.73e+4 (3.49e+4)**	4.32e+4 (3.48e+4)	9.47e+4 (4.16e+4)	4.80e+4 (3.51e+4)	4.38e+4 (3.74e+4)
maxTorq	1.97e+5 (1.59e+5)	3.85e+5 (1.86e+5)	**1.96e+5 (1.57e+5)**	2.83e+5 (1.57e+5)	7.61e+5 (1.46e+5)	5.95e+5 (1.96e+5)	2.18e+5 (1.56e+5)
space-ga	**7.63e+0 (2.41e+0)**	8.74e+0 (2.76e+0)	**7.63e+0 (2.43e+0)**	9.52e+0 (1.90e+0)	1.36e+1 (3.66e+0)	1.05e+1 (2.85e+0)	7.65e+0 (2.39e+0)
ConcrStr	3.82e+3 (1.72e+3)	**3.61e+3 (1.44e+3)**	3.82e+3 (1.72e+3)	5.90e+3 (1.95e+3)	4.73e+3 (1.98e+3)	5.74e+3 (1.99e+3)	4.14e+3 (1.69e+3)
acceleration	**4.81e+2 (1.80e+2)**	8.10e+2 (2.43e+2)	4.82e+2 (1.81e+2)	6.48e+2 (2.23e+2)	8.22e+2 (2.74e+2)	8.06e+2 (2.57e+2)	5.19e+2 (1.76e+2)
airfoild	2.05e+11 (5.15e+10)	1.77e+11 (4.11e+10)	**1.74e+11 (4.00e+10)**	2.03e+11 (5.13e+10)	2.05e+11 (5.15e+10)	5.93e+11 (6.36e+10)	2.05e+11 (5.15e+10)

Table 12: Mean and standard deviation of the **SERA** metric obtained for each dataset considering **XG** technique. The best results are highlighted in bold.

	None	SMT	RO	RU	GN	SG	WERCS
Dataset				F1-score			
rabe-265	1.11e+4 (1.46e+4)	1.09e+4 (1.47e+4)	1.15e+4 (1.50e+4)	**1.02e+4 (1.44e+4)**	1.06e+4 (1.41e+4)	1.05e+4 (1.44e+4)	1.04e+4 (1.43e+4)
wine-quality	1.17e+3 (1.01e+2)	9.33e+2 (1.32e+2)	1.10e+3 (9.40e+1)	9.92e+2 (8.73e+1)	**6.44e+2 (6.69e+1)**	1.05e+3 (9.26e+1)	9.66e+2 (8.20e+1)
analcat-apnea3	1.32e+8 (1.27e+8)	1.30e+8 (1.25e+8)	1.24e+8 (1.20e+8)	1.27e+8 (1.23e+8)	1.32e+8 (1.27e+8)	**1.12e+8 (1.09e+8)**	1.21e+8 (1.14e+8)
cocomo_numeric	8.36e+5 (1.36e+6)	9.16e+5 (1.35e+6)	**6.48e+5 (1.12e+6)**	1.02e+6 (1.48e+6)	8.55e+5 (1.35e+6)	7.46e+5 (1.23e+6)	8.36e+5 (1.36e+6)
abalone	3.79e+3 (6.46e+2)	3.59e+3 (6.68e+2)	3.55e+3 (6.12e+2)	3.42e+3 (6.14e+2)	3.13e+3 (5.81e+2)	3.43e+3 (6.17e+2)	**3.09e+3 (5.58e+2)**
a3	5.71e+2 (5.58e+2)	5.67e+2 (5.45e+2)	5.65e+2 (5.38e+2)	5.76e+2 (4.94e+2)	**5.56e+2 (5.04e+2)**	6.01e+2 (4.51e+2)	6.32e+2 (4.61e+2)
forestFires	2.04e+5 (3.72e+5)	2.07e+5 (3.79e+5)	2.17e+5 (3.75e+5)	2.05e+5 (3.60e+5)	2.09e+5 (3.73e+5)	2.23e+5 (3.64e+5)	**2.00e+5 (3.51e+5)**
sleuth_case1202	1.59e+4 (1.55e+4)	**1.34e+4 (1.24e+4)**	1.35e+4 (1.23e+4)	2.39e+4 (1.68e+4)	**1.34e+4 (1.31e+4)**	1.49e+4 (1.55e+4)	1.50e+4 (1.49e+4)
a1	1.35e+3 (8.39e+2)	1.36e+3 (7.37e+2)	**1.32e+3 (8.44e+2)**	1.39e+3 (8.09e+2)	1.49e+3 (5.76e+2)	1.87e+3 (7.69e+2)	1.65e+3 (8.22e+2)
a7	4.82e+2 (3.66e+2)	4.21e+2 (3.37e+2)	4.21e+2 (3.33e+2)	4.31e+2 (3.00e+2)	4.02e+2 (3.02e+2)	4.08e+2 (2.71e+2)	**3.62e+2 (2.75e+2)**
kidney	1.83e+0 (1.90e+0)	1.57e+0 (1.45e+0)	1.43e+0 (1.47e+0)	1.56e+0 (1.51e+0)	1.49e+0 (1.41e+0)	**1.23e+0 (1.16e+0)**	1.52e+0 (1.47e+0)
boston	2.67e+3 (6.20e+2)	2.46e+3 (6.38e+2)	2.40e+3 (5.75e+2)	2.58e+3 (6.29e+2)	2.55e+3 (6.43e+2)	**2.34e+3 (5.88e+2)**	2.47e+3 (6.03e+2)
sensory	5.14e+2 (4.26e+1)	4.48e+2 (3.41e+1)	5.12e+2 (3.85e+1)	5.13e+2 (4.35e+1)	**4.42e+2 (3.95e+1)**	5.12e+2 (3.99e+1)	5.15e+2 (4.04e+1)
a2	**9.48e+2 (1.47e+3)**	9.80e+2 (1.54e+3)	1.02e+3 (1.55e+3)	1.10e+3 (1.22e+3)	9.85e+2 (1.54e+3)	1.65e+3 (1.17e+3)	9.89e+2 (1.45e+3)
triazines	2.38e-01 (1.26e-01)	2.10e-01 (9.30e-02)	2.25e-01 (1.08e-01)	3.59e-01 (9.30e-02)	2.38e-01 (1.26e-01)	3.78e-01 (1.05e-01)	**1.98e-01 (8.20e-02)**
kdd_coil_1	1.74e+3 (1.12e+3)	**1.64e+3 (1.09e+3)**	1.68e+3 (1.02e+3)	2.29e+3 (1.03e+3)	1.68e+3 (1.10e+3)	2.45e+3 (1.20e+3)	1.85e+3 (1.05e+3)
mortgage	2.70e+2 (4.58e+1)	2.54e+2 (4.14e+1)	2.55e+2 (3.97e+1)	2.69e+2 (4.58e+1)	**2.37e+2 (5.19e+1)**	2.52e+2 (4.04e+1)	2.70e+2 (4.28e+1)
treasury	3.30e+2 (7.38e+1)	**3.12e+2 (7.15e+1)**	3.14e+2 (6.77e+1)	3.29e+2 (7.43e+1)	3.18e+2 (8.14e+1)	3.16e+2 (6.87e+1)	3.19e+2 (6.84e+1)
debutanizer	1.75e+0 (2.32e-01)	1.72e+0 (2.48e-01)	1.76e+0 (2.81e-01)	1.83e+0 (2.37e-01)	1.74e+0 (2.46e-01)	2.15e+0 (3.18e-01)	**1.70e+0 (2.34e-01)**
fuelCons	4.44e+2 (1.03e+2)	4.04e+2 (9.23e+1)	4.07e+2 (8.63e+1)	4.29e+2 (9.89e+1)	4.16e+2 (9.06e+1)	**3.95e+2 (8.39e+1)**	4.08e+2 (8.53e+1)
heat	1.78e+5 (3.37e+4)	1.54e+5 (3.66e+4)	**1.39e+5 (2.61e+4)**	1.69e+5 (3.26e+4)	1.45e+5 (2.68e+4)	1.59e+5 (2.81e+4)	1.57e+5 (3.06e+4)
california	7.42e+12 (3.12e+11)	4.80e+12 (2.65e+11)	6.68e+12 (3.07e+11)	7.03e+12 (3.06e+11)	**4.74e+12 (2.78e+11)**	6.27e+12 (2.36e+11)	8.52e+12 (3.76e+11)
cpuSm	1.51e+5 (2.63e+5)	1.37e+5 (2.36e+5)	**1.11e+5 (1.98e+5)**	1.72e+5 (2.94e+5)	1.18e+5 (2.07e+5)	**1.11e+5 (1.97e+5)**	1.28e+5 (2.13e+5)
compactiv	**2.37e+5 (9.84e+3)**	2.38e+5 (9.97e+3)	2.39e+5 (9.79e+3)	2.40e+5 (1.00e+4)	**2.37e+5 (9.84e+3)**	2.41e+5 (9.86e+3)	2.38e+5 (9.71e+3)
availPwr	1.65e+5 (3.91e+4)	1.12e+5 (3.34e+4)	1.54e+5 (3.59e+4)	1.62e+5 (3.72e+4)	**1.07e+5 (2.69e+4)**	1.51e+5 (3.61e+4)	1.60e+5 (3.69e+4)
maxTorq	5.12e+5 (1.55e+5)	3.71e+5 (1.27e+5)	4.46e+5 (1.27e+5)	4.93e+5 (1.55e+5)	**3.60e+5 (9.84e+4)**	4.34e+5 (1.27e+5)	4.76e+5 (1.36e+5)
space-ga	1.73e+1 (3.72e+0)	1.70e+1 (3.35e+0)	1.63e+1 (3.13e+0)	**1.07e+1 (3.05e+0)**	1.73e+1 (3.72e+0)	1.54e+1 (3.10e+0)	1.57e+1 (3.39e+0)
ConcrStr	9.83e+3 (3.27e+3)	8.44e+3 (3.18e+3)	**8.17e+3 (2.54e+3)**	9.63e+3 (3.12e+3)	8.67e+3 (2.75e+3)	8.57e+3 (2.91e+3)	8.74e+3 (2.83e+3)
acceleration	1.07e+3 (3.17e+2)	9.39e+2 (2.36e+2)	9.29e+2 (2.01e+2)	1.05e+3 (3.10e+2)	**8.90e+2 (2.49e+2)**	9.31e+2 (2.15e+2)	9.93e+2 (2.58e+2)
airfoild	9.32e+10 (1.01e+10)	9.32e+10 (1.01e+10)	**9.12e+10 (1.05e+10)**	1.31e+11 (1.41e+10)	9.32e+10 (1.01e+10)	9.52e+10 (1.14e+10)	9.32e+10 (1.01e+10)